DOCUMENT RESUME

ED 228 388 CE 035 184

AUTHOR Thirumalai, M. S.
TITLE Instructional Materials Development. Monograph No. 3. Literacy Curriculum and Materials Development. Portfolio of Literacy Materials. Series I: Four Monographs.
INSTITUTION United Nations Educational, Scientific, and Cultural Organization, Bangkok (Thailand). Regional Office for Education in Asia and the Pacific.
PUB DATE 81
NOTE 97p.; For related documents, see CE 035 182-185.
AVAILABLE FROM UNIPUB, Box 433 Murray Hill Station, New York, NY 10016 (Set of four, Order No. 0521-UB95--$21.00).
PUB TYPE Guides - Non-Classroom Use (055) -- Information Analyses (070)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Adult Education; Adult Educators; *Adult Literacy; Adult Programs; Developing Nations; Faculty Development; *Foreign Countries; *Instructional Materials; *Literacy Education; *Material Development
IDENTIFIERS *Asia; *Pacific Region

ABSTRACT

This monograph, one of four in a series, contains material on a particular aspect of literacy training. Developed from reports, papers, and case studies from the Regional Literacy Workshop (November 29-December 20, 1979) held in Udaipur, India, the monographs are suggested for use in training programs for literacy personnel as background materials, an exercise in materials production, or a course of lectures. This monograph focuses on developing instructional materials for an adult literacy program. The need for instructional materials, the need for their development, and the types of material needed are discussed. Concepts and principles that must be incorporated into the materials developed are then addressed. These include national policy, learners' individual needs, individualization of materials and teaching, and the choice of language variety. The process of developing instructional materials is considered in terms of agencies to be involved, need analysis, setting up objectives, organization of the materials, draft formulation, materials testing, teachers' guides, and workbooks. Evaluation, followup, and research of the materials are also discussed. Sample instructional materials are appended. (YLB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED228388

Literacy Curriculum and Materials Development

Portfolio of Literacy Materials

Series I: Four Monographs

Monograph No. 3

INSTRUCTIONAL MATERIALS DEVELOPMENT

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

M. Lasanthara

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

UNESCO REGIONAL OFFICE FOR EDUCATION IN ASIA AND THE PACIFIC
Bangkok, Thailand, 1981

CE 035 184

© Unesco 1981

Unesco Regional Office for Education in Asia and the Pacific
G.P.O. Box 1425
Bangkok, Thailand

Printed in Thailand

Opinions expressed in this publication do not necessarily coincide with any official views of Unesco. The designations employed and the presentation of the material herein do not imply the expression of any opinion whatsoever on the part of Unesco concerning the legal status of any country, or of its authorities, or concerning the delimitations of the frontiers of any country or territory.

BKL/81/OP/104-107/1500

C O N T E N T S

Chapter One - INTRODUCTION 1

The need for instructional materials 1

The need for the development of instructional materials . . . 3

Types of materials 6

Chapter Two - CONCEPTS AND PRINCIPLES OF INSTRUCTIONAL MATERIALS 10

National policy and instructional materials 10

Learners' individual needs and instructional materials . . . 11

Individualization of materials and teaching 14

Language and instructional materials 17

Chapter Three - THE PROCESS OF DEVELOPING INSTRUCTIONAL MATERIALS 25

Agencies to be involved 25

Analysis of the situation including need analysis 30

Setting up objectives 34

Sample of literacy objectives . . 34

Organization of the materials . . 39

Draft formulation 51

Testing of the materials 59

Materials in relation to mass implementation 64

Teachers' guides 67

Work-books 69

C O N T E N T S (cont'd)

Chapter Four - EVALUATION, FOLLOW-UP AND RESEARCH . . 70
Evaluation 70
Follow-up 77
Research 78

APPENDIX - Sample instructional materials prepared at the Udaipur workshop . . . 83

ACKNOWLEDGEMENTS

This monograph on Development of Instructional Materials is based on the materials submitted to and emanating from the Regional Literacy Workshop on the "Development of Curricular, Motivational, Instructional and Follow-up Materials including those for the Media," held in Udaipur, India, from 29 November to 20 December 1979. These documents include the Country Status Reports and Case-Studies submitted by the participating Member States, Working Papers prepared for the Workshop, sample curricula and materials prepared by the Participants in the Workshop and the Draft Report of the Workshop. The Unesco Regional Office for Education in Asia and the Pacific expresses its appreciation to Professor M.S. Thirumalai, Resource Person for the Workshop, for helping in the preparation of this monograph.

Chapter One

INTRODUCTION

The need for instructional materials

The need for instructional materials may be looked at from the point of view of the teacher, the learner, the planner and the evaluator, the existing conditions of learning in each country, and from the point of view of the task itself.

From the point of view of the teacher, a well-developed set of materials constitutes a plan of action. It would guide him in planning his teaching activity. He can, with the help of the instructional materials, go from a simple task to a more complex task. The materials would give him a sequence of lessons already organized in a graded fashion. They would also help him with various types of reinforcement activities that he could follow up in the classroom. More importantly, in mass-based literacy campaigns, well-organized literacy materials would be of great help to the average teacher in giving instruction effectively.

From the point of view of the learner, as the instructional materials have already divided the whole learning task into manageable units and organized it into a sequence, the learner will gain confidence through the steady progress he makes in learning. If the materials have a mechanism to help the learner to go back and master what he has not learned well so far, it should be a suitable auto-instructional aid for him. Moreover, if concrete materials are prepared and made available to the learner, they would be useful to him as an aid for learning outside the classroom also. The materials would indicate to him how much he has learned, and how much more he has yet to learn.

From the point of view of the planner and the evaluator, the mastery of the materials would be an index of achievement of an individual learner. It would also be an index of achievement by a learner population. As the learner

population would generally have a mixed ability range, the measurement of achievement of the learners has to be carried out with reference to a tool to which all the learners are exposed. Materials play this role. The planner would evaluate the performance of the individuals and the groups on the basis of the mastery of the materials. He would also monitor, with the help of the operations covered by the materials, the progress of a literacy learning activity.

In any complex learning task, what is to be learned cannot be learned all at once. The learning task has to be broken up into smaller parts. Although each part is a separate entity, it has connections with the other parts or entities, making a coherent whole in the final outcome.

The acquisition of literacy is a complex task, involving skills ranging from the motor co-ordination of hand-movements in writing to visual discrimination, to developing a correspondence between visual cues and sound values and to a comprehension of what is conveyed in the visual matter. This complex learning task is achievable only in a graded sequence. For this purpose, the splitting of the task into connected parts has to be carried out as a conscious and deliberate effort. This is a characteristic of well-planned materials.

In many developing countries there are languages which do not have written forms. In such cases, and also in many communities in which literacy skills are not highly valued or - though highly valued - the learners consider literacy skills as not important to their present way of life and economic conditions, the materials could have the function of highlighting the usefulness of literacy skills.

- It is through instructional materials that educators give substance to a specific subject, and interpret and describe accurately the syllabus.
- Instructional materials are a tool to realize the instructional objectives of a specific subject.
- Instructional materials present the related content in a graded way, thus helping the learning activity.
- Instructional materials are the base around which learning activities are generally built.
- Instructional materials constitute both content and technique.

- Instructional materials are meant for both teachers and students.
- Instructional materials in a literacy class are a formal tool that can be used for non-formal purposes also.
- Instructional materials serve as standard references on a subject.

In instructional materials, the subject matter is appropriately simplified; it is sequential and each section in it generally presupposes a knowledge of earlier sections. Instructional materials may be presented in any mode, spoken or written, through printed form or through slides, movie films, television or radio. Moreover, printed materials can be written, re-read and studied from time to time.

Instructional materials are used as the basis for a given course or subject. They provide practice and drill. They suggest certain procedures to the teachers. An inadequate supply of materials can affect the process of mastery of literacy, just as the use of inefficient literacy materials does.

As several country case studies presented in the Unesco Udaipur Workshop suggest, instructional materials are needed not only to acquire literacy, but also to retain the literacy acquired, to provide motivation for reading, to instil reading habits, to make the acquired literacy functional, to add to the knowledge about the environment, and so on.

The need for the development of instructional materials

We shall now look into the need for the development of instructional materials. This raises several questions: what is the quality of existing adult literacy materials? Can these materials not be used? Can the materials used for child literacy instruction be used for adults? Is there any other need to develop new materials for adult literacy purposes?

We must recognize that adults' learning is different from children's learning in many ways. We should also recognize that the materials used for child instruction in the formal school system cannot readily be used for adult literacy purposes. We should also realize that the goals of adult literacy and child literacy may be different. It is also a fact that most of the available adult literacy materials in

the developing countries are not free from serious defects which hamper the speed and quality of literacy acquisition.

The educational objectives and the social and economic objectives of adult literacy programmes are different from those of the instruction provided to children. This difference requires a different set of materials for use in adult literacy teaching. If we use the materials meant for, say, primary-school classes for the teaching of literacy to adults, the objectives of adult literacy programmes are not likely to be achieved. Moreover, adult learners' interests are generally different from child learners' interests. This also necessitates the preparation for adult literacy of materials different from those used with children.

Most of the existing adult literacy materials have to be improved in several ways. They are not properly graded in terms of the learning tasks to be carried out by the learners. There are no appropriate reinforcement exercises. More often than not, they follow a single format or mode. Vocabulary items and sentence structures are not properly identified and utilized. The printing is not satisfactory in many respects. The visual component is not particularly strong. The choice of language is also not appropriate. Adequate instructions for the use of the materials are not available in the form of teachers' guides. The length of the lessons has not been carefully controlled. Different forms of communication are not utilized.

The primers leave much to be desired in terms of appropriate stylistic variation. The primers are not prepared to meet the requirements of various professional groups. Because mass production is aimed at, no individualized approach is possible. The link between one lesson and the next is not well brought out nor even thought out. There is no proper control of vocabulary or sentence structures. There are no reinforcement exercises to enable the learners to use what they have learned in the classroom. A balanced use has not been made of different modes of language. There is no appropriate linkage between the curriculum, the material, the classroom activity, the reinforcement activities and performance of the learners.

In some countries, the problem of literacy is closely linked with the problem of the development of native or national languages. In these countries the major problem is

to first give a scientifically prepared writing system to the languages of the people, and then to encourage the people to master the literacy skills. In some cases, the standardization of spelling is a serious problem. The standardization of spelling is also a serious problem in countries where there have been deliberate attempts to switch from an older script to a newly-adopted script. It gives rise to a need for the development of new materials. Changing national goals, availability of newer and more effective means of instruction, findings of research on modes of learning by individuals, varying group interests, mixed abilities of learners, and varying rates of mastery of literacy among individuals, all of these emphasize the need for developing new materials, and the need for a continuing revision of the existing ones.

India reports that an important step in planning and organizing adult literacy programmes is the development of curricula and instructional materials suited for various types of adult education activities and learners in connection with the different educational components of its National Adult Education Programme, namely, literacy, functionality and social awareness. Suitable materials do not exist at present, and hence the need for the development of new instructional materials. India further reports that there cannot be one approach only for developing these materials. Each organization will have to evolve its own model for preparation of such materials. Importing models tried elsewhere may be costly and they will not work well in the local environment in any case.

The Philippines reports that there is a dearth of non-formal education materials, which includes textbooks, teacher's manuals, posters and flip charts, as well as facilities and equipment such as mimeographing machines, radio sets and the like. Afghanistan, while recognizing the need for new materials speaks of the positive gains of some limited experimental activities carried out with the support of Unesco and other agencies, which led to the design and experimental try-out of functional literacy materials for specific groups.

The Lao People's Democratic Republic reports that literacy and knowledge-promoting activities are difficult and complicated because not enough lessons have been prepared for them as yet. The country lists lack of learning materials as one of the problems faced in the implementation of adult literacy programmes.

The Indonesian report indicates the special need for new materials: the early fight against illiteracy in Indonesia was intended to introduce letters and numbers, while today's attempt is aimed not only at eliminating illiteracy in Latin letters and numbers, but also at overcoming illiteracy in the Indonesian language - and acquire basic knowledge.

India and Pakistan list the inadequacy and low quality of learning materials as one of the reasons for past failures in literacy. India reports that until very recently most materials for adult education tended to ignore problems of language and local culture. Often materials for speakers of dialects were not available, and the tendency persists to teach such learners through materials in standard languages, resulting in low motivation. This concern is shared by all the participating countries.

Types of materials

First, we may make a distinction between the materials meant for literacy acquisition and materials meant for the retention, use and qualitative improvement of acquired literacy. Second, we may make a distinction between materials meant for literacy acquisition and functional instruction on the one hand, and non-literacy materials meant for giving out information of different sorts. Within materials for literacy instruction, we may have materials for script writing, script reading, word reading, word writing, sentence reading and sentence writing. We may also have materials with discourses (otherwise described as running texts) which include materials for simple reading comprehension, materials for simple writing, complex items for reading and writing in different forms/genres of language, materials to switch over from a local dialect to standard language, and the like. All these discourses or running text elements have to be presented and acquired through different language skills; namely, listening, speaking, reading and writing.

Under the materials for functional instruction, there are many different forms of communication such as, for instance, letters, petitions and posters. Trade manuals are another form. These materials are also presented through four language skills, with reading and writing adopted for the mastery of literacy.

The non-literacy materials for presenting information are presented through visuals and the aural medium. Different art forms, both traditional and modern, are also used.

Another classification of materials would be the following:

1. Discussion books

These provide an opportunity for discussion of identified problems with the help of pictures. They impart literacy skills, seeking words and sentences from the problems and their solutions.

2. Content sheets

These are small folders, written in a language level appropriate to the learners. They contain detailed information about the particular problem.

3. Visual aids

(Film strips, flash cards, flannel graphs, charts and others). These demonstrate skills, and demand little literacy competence. They aim at the classification of theoretical concepts, and present and demonstrate models for action.

4. Follow-up books

These help the learners retain their literacy skills. They should help them to attain a deeper understanding of socio-economic problems, ard a greater ability to arrive at solutions to these problems.

Still another classification of materials is the division of the learning materials into basic, bridge, follow-up and audio-visual aids. This division is claimed to be based on different mental levels of learners and stages of learning.

1. Materials

Basic materials are generally of two main types. In the first type, the focus is on the development of literacy skills without a specification of the content through which the skills are to be achieved. In the second type, literacy skills are sought to be achieved through content based on the problems faced by learners in their environments.

The basic learning materials are generally presented in the form of primers. Some of them have the major function of reinforcing the knowledge of the problem-based contents.

2. Bridge materials

These stabilize and maintain the literacy skills. They serve as a link between the beginning stages of literacy skills and the areas where these skills are fairly well

developed. A distinction between the basic learning and bridge materials is made: while in the basic materials there is much dependence on the oral words, the bridge materials emphasize the learner's skills to acquire the problem-oriented knowledge through the written words. It is claimed that the principle 'high content - simple language' guides the preparation and presentation of these materials. The bridge materials are presented in the form of content sheets, folders, booklets, and the like (a single problem receives the major attention in each of these materials).

3. Follow-up materials

These materials aim at making the learner a self-reader; they aim at strengthening the literacy skills thus far mastered so that the learner does not relapse into illiteracy. The contents of these materials should be characterized by depth of thought and meaning, multi-pronged attacks on socio-economic problems from different angles and a detailed treatment of various subjects. The follow-up materials take the form of short stories, novelettes, dramas, articles, 'how to do' instructional books and different forms of writing such as narration, description, and exposition.

4. The audio-visual aids and materials

These help and supplement the learning process at various stages of basic, bridge, and follow-up materials. In addition, they also serve independently as a medium of learning. The forms of audio-visual aids are of a wide variety; in essence, they are visualized as problem-based and addressed to a clearly-identified target group. The materials are intended to enable their users to identify the underlying causes of the individual and environmental problems, and to solve these problems with very little dependence on external assistance.

Moreover, the material production schemes generally aim at the production of various types of materials. The basic assumption is that variety in materials creates in individuals an interest in learning, and ensures the learner's continued involvement in educational programmes, minimizing the rate of drop-out. It is also assumed that a multi-sensory approach to the preparation and presentation of materials is more effective than having materials which exploit only one sensory mode. Pictures, printed words, audio-visual aids and demonstrations should all be integrated.

Whatever the types of materials, they should demand and encourage the involvement of learners in the learning task. Such involvement would generally produce more effective learning than would be the case if the learners were uninvolved and passive.

Chapter Two

CONCEPTS AND PRINCIPLES OF INSTRUCTIONAL MATERIALS

National policy and instructional materials

National policy would tell us the languages/dialects in relation to a particular geographical territory in which the literacy programme is organized, the age group of the learners, the performance objectives for the attainment of which the literacy skills are imparted, the maximum variation allowed in the level of literacy achieved, the duration of the entire literacy programme for the country, the staffing pattern, the qualifications required of the teachers/instructors, the periodicity of teacher training programmes, the incentives to both learners and teachers, the agencies entrusted with the development and evaluation of materials, the supply and design of materials, the pricing policy for the materials produced and distributed, the overall political and national objectives, sometimes the method of presentation, and many a time the content and the philosophy of education, instruction and learning.

The national policy for the adult literacy programme may or may not distinguish between the formal school system and the non-formal educational process associated generally with the adult literacy programmes. The national policy may also decide the variety and combination of media to be used for adult literacy programmes, and may indicate whether the adult literacy programme is to be a uni-disciplinary or uni-ministerial programme or an inter-ministerial activity. Finally, the national policy may also indicate whether it should be a governmental activity or voluntary work or a combination of both.

A cardinal principle, among others, for the success of an adult literacy programme is that the instructional materials should be in conformity with the national policy on adult literacy, and the curriculum identified and set for the literacy programme. The process of identifying and developing an appropriate curriculum is dealt with in detail in the first monograph of this series, entitled Curriculum Development.

In the context of India, it has been suggested that the following principles should be adhered to so that the materials serve the ends of curriculum:

- The contents should be essentially problem-oriented and relevant to learners' needs and environment.
- The learners should be enabled to apply the acquired knowledge and skills immediately to solving their problems.
- The learners should develop a critical attitude towards their problems, reflect over them, analyse them, and take proper and timely decisions.
- The contents should broaden the learners' understanding of the alternative courses of action in the face of a given problem.
- Family life is to be an integral component of the materials.
- Emphasis is to be laid on ways of expediting the development of literacy skills.

In Thailand, it is strongly emphasized that the literacy programmes cannot hope to have an effect on the national development process unless they provide illiterates with opportunities to gain not only literacy skills but also confidence in the problem-solving abilities needed to take steps on their own. This policy leads to the emergence of certain tenets and certain relationships between curriculum and materials. These are as follows:

1. Curriculum should focus on the real and immediate problems of adult learners and their community.
2. Instructional materials should pose problems or describe potential problem conditions and provide related technical information or indications as to where such information can be obtained.
3. Learning sessions should be held in an atmosphere conducive to sharing experiences and ideas.
4. The instructional processes should require learner participation, draw on learner experiences, and seek learners' solutions to learner and community problems.

Learners' individual needs and instructional materials

Learners' needs may be looked at from the point of view of the linguistic and cognitive abilities of an

individual adult, and the functional goals for the attainment of which they would be acquiring mastery over literacy.

A normal adult has mastered certain communication skills including the basic structures of language for speaking and listening purposes. An adult does not accept imposed discipline. Some adults come to learn on their own, and some must be persuaded to learn. Some come to learn about a subject; some come to see what is it all about; some come to make friends; some like working with a particular teacher; some hope that acquisition of skills would help to augment the family budget; some come to escape the boredom of their role as housewives; some come to feel part of a group; some come to gain recognition by the other group members; some come to learn because others do. Thus, people's motives for pursuing literacy differ.

The past behaviour and habits of adults influence their present behaviour. In addition, the social differences and cognitive differences among individuals also lead to differences in the individual needs. Adults should be given a feeling of responsibility by making the best use of their time and by providing appropriate and adequate activities. No adult in the class should get the feeling that he or she is ignored.

Furthermore, adults should be given ample opportunity to develop their interests. The teaching methods and techniques must take into account their expressed and implied demands. We should also bear in mind the character and strength of motivation in relation to varying degrees of individual capacity, the extent and nature of previous education and the practical possibilities of time and place.

We must recognize that children can absorb large quantities of facts with less difficulty than adults. In adulthood we aim at reinforcing skills and abilities. Adults differ among themselves with regard to the degree of attention they pay to a task, and to the mastery of the task. Attention is closely related to motivation. Even when motivation is at its peak, the span of attention could be less than the level demanded by the motivation. The determinants of attention can be found both in the task and the individual. Although complexity is inherent in the task, there are still subjective elements which determine the complexity. Interest of the learner is a major determinant of attention, but this is generally subjective. These facts are to be borne in mind in

preparing instructional materials and relating them to learners' needs.

Yet another factor that we should bear in mind in relation to learners' needs is the preference as to modality. Formal education, more often than not, tends to channel awareness into only two senses, vision and hearing. People who may do better through kinaesthetic (using motion) and tactile operations do not get a chance to prove their abilities. Restricting the learning facilities to some specified means to the exclusion of others is against the nature of human learning. This is so because most learning tasks involve several of senses. We must realize that selection of the appropriate ones will be governed by individual differences as well as by the requirements of the task. If we take into account the differing sensory preferences of individuals and groups, it would encourage the development of appropriate learning materials and techniques.

As regards the adults, the acuity of their senses tends to decrease with age. To overcome this, we should present instructional materials through as many of the senses as possible. This would make allowance for individual differences in sensory predominance. It would also facilitate attention. This is based on the dictum that there is no single way of communicating with every one; acceptance of this dictum would demand the production of varied types of materials.

For a successful programme of adult literacy, we should construct programmes which directly correspond with the needs of adults. Instructional materials should be designed so as to help individuals to solve the problems posed by everyday life. The materials should be sensitive to the particular needs of individuals. The major types of needs that the materials and teaching should take care of are as follows: (a) educational. (b) work-related, (c) individual's personal and life-cycle needs, (d) needs for special education in the case of groups such as the hard-of-hearing, (e) the needs of particular collective groups, and (f) mass needs.

In essence, functional literacy is interpreted as an exercise in pure literacy integrated with development. It becomes a constituent part of a development plan. It differs from mass campaigns which are uniform and standardized programmes. The materials for the programme must be selective and flexible, easily modifiable to take account of the diversity of collective and individual requirements, and of

particular situations. Within the framework of functional literacy, and hence the materials used in these programmes, the mastering of the skills of reading, writing and arithmetic and occupational, socio-economic and civic training are integrated. They are oriented towards the solution of practical problems encountered by the members of the particular group in their professional and social lives.

Individualization of materials and teaching

Individualized instruction in adult literacy implies a method of facilitating the acquisition of literacy skills at each learner's optimum rate. The emphasis is on learning and not on teaching. In the individualized adult literacy programme, the teacher corrects errors, supplies acceptable models for performance, and guides learners in their individual learning activities. The teacher provides a series of opportunities to the learners to acquire and master the skills. He does not always prescribe what the learner should do; instead, he guides the learner in the process of mastery of skills. The materials for use in the individualized adult literacy programmes must exemplify these characteristics of the teacher and must make provision of a similar nature.

The adoption of programmed instruction techniques in the preparation and presentation of materials is another effective way of individualizing the materials. This means small-scale programmes producing good results as we proceed, increasing quantity as quality develops, quality for all learners at specified levels of performance, and emphasis on performance objectives according to the optimum rates and interests of individual learners. Making provision for individual differences in ability, interest and motivation is the chief characteristic of individualized instruction and materials: each learner is allowed to progress at his own pace.

We should make a decision on when to work in groups, and when to work on a one-to-one optimum rate. Well-conceived materials facilitate this. The materials should make provision for testing the learners often for performance, and this should be flexible enough to test the learners when they want to be tested. They must know what they are to know, when and why. The learners proceed to the next unit/lesson in the materials after a sufficient mastery of the preceding ones. Provision should also be made for self-evaluation of one's own performance.

As regards the functional goals towards which the learning programme is organized, the curriculum would have identified the gaps or deficiencies in the existing knowledge and performance of the learners. Here also, however, the adult population would again be a mixed ability group. Each individual needs to be attended to specifically to help him or her overcome the difficulties faced in mastering a task. It is of course not possible for even a highly motivated and efficient teacher nor well-thought-out and planned instructional materials to attend to all the specific needs of the learner, to the satisfaction of all concerned - the teacher, the materials producer and the learner.

The learning materials, if meant for different individuals, have to be so prepared that there is a flexibility in the organization and presentation of specific points. This may be achieved in several ways. There may be reference back and cross-reference mechanisms built into the materials. There may be a wide variety of mixed ability groups. The teacher will be required to give suitable instructions to the learners as to the number and kinds of exercises they must complete before proceeding from one lesson to the next. Each lesson must be considered a diagnostic tool of achievement.

Even when the above built-in mechanisms are established in instructional materials, there may still be a need for the teacher to prepare his own materials to cater to the individual needs of the learners. In order to cater to this demand, it may be necessary to visualize, in advance, the requirements on the basis of a survey of the learners' needs over a representative population, and to prepare a series or packets of learning materials in such a way that all the major needs would have been foreseen and suitable materials prepared.

We shall now briefly review how the relationship between learners' individual needs and the instructional materials is handled in a few countries of the region.

Papua New Guinea emphasizes the continuing educational needs of school learners, while recognizing the needs of the unschooled or underschooled adults. In Nepal, the methods and strategies of adult education programmes emphasize the due consideration of local needs and situations. Their experimental programme was planned at the local level. To prepare adults to cope with their daily needs, problems and concerns, more emphasis was laid on practical aspects of life.

The curriculum set for adults should be something not just given by the functionaries but something really wanted by them. Therefore, a survey of the areas was conducted. Based on the data thus obtained, an adult primer, and textbooks in arithmetic, agriculture and health were developed. The adult primer and arithmetic texts were used with the agriculture and health books only when the messages they contained were applicable to that particular place.

Nepal further points out that it has been a matter of great concern for curriculum developers how they should strike a balance by maintaining just one curriculum throughout the kingdom. The needs, the concerns and the languages of people vary from place to place. It is not possible to have a separate curriculum or materials for every single place; at the same time it is erroneous to believe that one single curriculum and one set of materials can effectively serve the entire rural masses.

The Socialist Republic of Viet Nam speaks of the special needs of the ethnic people and the youth cadres.

Burma identifies the following as the special needs of adult illiterates: (a) The learners learn to read their lessons and even the newspapers in a very short time but comprehension is rather slow, (b) The learners do not acquire writing skills as quickly as reading skills. They have difficulty in learning words that have the same pronunciation although they are spelt differently. Accordingly these needs of learners are to be incorporated into the design of the materials.

The Indonesian experiment seeks to take account of the learners' individual needs through the preparation of a comprehensive package of materials in short booklets on a wide variety of topics from which the learners can choose to meet their individual needs.

The Indian report speaks of materials designed to cater especially to the needs of tribal groups, minorities, and of the materials linking literacy with development activities. There are separate materials for men and women, for adults of urban and rural areas - and in spoken idioms as opposed to written language, where such a distinction is maintained.

The Philippines report describes the identification of the needs of special groups, such as religious groups, and

the preparation of materials to cater to their needs. Many instructional materials have been prepared locally and several translated from other languages and duplicated for local use especially to take care of linguistic differences.

Afghanistan speaks of the development of curriculum and materials, both for formal and non-formal education, to fit the needs of the people.

Bangladesh has produced primers designed to meet the needs of the villagers. It was found that learners wanted religious instruction. So, books on religious instruction were published. Several topics have been covered in primers on the demand of the learners. However, Bangladesh also points out that it is very difficult to identify the correct needs of the rural people as they are not fully aware of them. As a result it is difficult to design and prepare suitable materials for them.

Thailand insists that effective literacy programmes be based on an understanding of the needs and situation of illiterates. Hence the materials should provide the learners with opportunities: (1) to acquire the skills needed to gather knowledge and information, (2) to analyse this input in relation to their own strengths and resources and their community's social, political, economic and environment contexts, and (3) to make decisions based on such analyses.

Instructional materials are sought to be prepared by India taking into view the problems of individuals or groups of learners. Each problem is to be considered separately and elaborated into a problem area. After that, attention is centred on analysis of the problem, objectives of dealing with the identified problem, the concepts to be introduced, obstacles faced in finding the solutions, leading questions for discussion, remedial measures, media to be used and the number of sessions required to deal with the problem.

Language and instructional materials

Before the production of instructional materials is begun, a basic decision has to be made about the choice of language variety which will be used and taught through the instructional materials. Languages are noted for the differences they exhibit and the gulf they maintain between the spoken and written forms. Languages also exhibit differences in their use from the point of view of the occupations of the users.

A proper form of the language must be chosen and instructional materials prepared in this. Instructional materials should be produced first in the dialect of the learner, and a progressive switchover made through a series of instructional materials from the dialects of the learner to the standard dialect which may be the form of language used for wider purposes of communication. But this switchover is to be carefully planned taking into account the ultimate literacy requirements of the learners and the literacy goals of the programme.

Another important aspect is with regard to the content to be chosen. Some argue in favour of a single-content focus, and allow only the various manifestations of the same content. Some argue in favour of a sprinkling of a variety of contents in order to attract the learners and to retain their motivation. The choice of content is governed, like so many other components of the literacy primers, by the curricular and other goals of the programme. One should look into the nature of the content, (humorous, fanciful, instructional), time of the content (present, past, future), and location of the content (universal, country, state, region).

A related decision is with regard to the choice of forms of the language to be used - poetry, essay, dialogue, narrative, folk tale, or 'how-to-do-it' materials (labels, instructions, recipes, child-care manuals, occupational, and economic advancement instructions, immediate communication, current events, religion, or recreation).

Yet another decision is with regard to the choice and control of linguistic structures. Controlled introduction is to be desired. We must prepare the list of elements to be introduced and sequentiate them by balancing between productivity and difficulty. Productivity is measured by frequency and on the basis of how an element is useful to construct natural sentences. Difficulties are measured in terms of distance between the spoken and the written forms of the same word, similarity and contrasts between the words in the same lesson, the need for 'unlearning' certain habits later on, sentence and word length, familiarity and relevance of sentences and words to the interests of learners and so on. One should emphasize the importance of linguistic and cultural naturalness of materials. No contrived structures should be used. One should exploit traditional and oral literature.

Two linguistic items require special attention in the beginning primers. These are (1) the kinds and quantum of sentences and (2) kinds and quantum of vocabulary that one should use in the instructional primers. Decisions on the choice and use of sentences may be based on questions such as what sentence structures are common in the language, what sentence structures are commonly used for the exposition of a particular topic, what the admissible stylistic variations in the language are, and how we control sentence length and complexity. We should also consider the various aspects of the use of punctuation, running the sentence from one line to the other in printing and such aspects.

As for the vocabulary choice and use, we should recognize that the quantum and kinds of vocabulary to be introduced depend on the content and the linguistic goals of the lesson. The choice of vocabulary should take into account the grammatical categories of the vocabulary, and should generally avoid synonyms. Sight words will have to be resorted to, but only minimally. The space between words and the graphemic changes due to sandhi* and the like must be taken into account.

Choice and control of language skills is an important aspect that influences the design and content of instructional materials. Reading and writing are the two skills that are generally emphasized in literacy instructional materials. The demonstration of what reading is, along with traditional pre-reading exercises such as reading pictures, picture stories, and jigsaw puzzles, is a useful beginning. In these pre-reading exercises native art may be fully exploited.

Reading mechanics that have been identified as effective tools for better reading must be reflected in various parts of lessons in the instructional materials; that is, parts of lessons to be earmarked for developing specific reading mechanics. Some reading steps may be developed to enable the learners to read the letters in combination (graphemes), then to read the letters in isolation, to read the letters in contexts, to read the words, to read the phrases and breath groups, to read the sentences with expression and fluency and with proper pronunciation and intonation. Ability to identify and break the phrase and breath groups in sentences should also be developed through the materials.

---

* Sandhi: change in the form of a word determined by its position in relation to other words.

Writing is a productive skill, but to reach the productive level the steps go from reproduction to production: from copying to free expression. This progression is achieved through guided work and activities such as tracing copying, taking dictation and other forms of writing. A good first step is to develop the learners' ability in the formation of the graphemes, to make the learners learn the different graphemic representations possible for each sound and to teach them pronunciation.

That the process of punctuation is a functional analysis of sentence structure should not be missed. As regards the methods of teaching writing to be adopted in materials, one should not forget that there are conflicts in the evidence and views about the superiority of one method over the other. While some teachers are against presenting minimally contrastive letters together as a single group, others are in favour of presenting letters which share similarity in shape. The alphabet method, the sound letter association method, the letter object association method, and shape similarity method must all consider the hand movements involved in writing the letters taught. In some languages there is a difference between the printed form and handwritten shape of the same letter. Adequate provision is required to meet the requirements of a switchover from the one to the other.

One should also think in terms of preparing materials for the transition from non-standard dialect to standard dialect, from a controlled vocabulary series to one recognizing and using other vocabulary items, materials with simple stories with much repetition in terms of sentence and vocabulary to develop fluency, booklets constructed with frequent letters, common types of sentence structures and punctuation to give the learners fluency in reading a variety of sentences, books on subjects partially unfamiliar, a variety of materials to stir the interest of the learners, several readers for the retention and maintenance of the literacy skills, and readers to give the learners functional information.

Exercises may be both oral and written; they may be performed in the classroom or at home, and may be both a group or independent activity. Exercises and drills follow

the curriculum and syllabus goals, and cover the content, language components, language skills and general aspects of communicative competence. Exercises may be divided into two broad groups - (1) content-based and (2) language-structure-based. Exercises have the twin task of practice and testing.

Exercises may also acquaint the learners with different forms of language. They may be presented in the form of multiple choice, filling in blanks, and matching items, or elicit sequential ordering, and recognition of objects. They may also be given for guided and free writing and reading. Dictation is an important activity to develop a feeling for a word, phrase and sentence, and the use of punctuation.

Exercises are necessary for reading as well as writing abilities. Reading exercises give practice in associating letters and words, with sounds. Reading comprehension exercises help test the students' recall ability. The learners may be asked comprehension questions step by step, from sentence to paragraph, then from a whole page. Writing exercises give practice in muscular co-ordination, spelling and in writing own sentences.

Some of the following exercises may be used:

1. Riddles to test and develop the learners' understanding of what they read
2. Halves of sentences may be matched
3. Questions on matters of common knowledge may be read and answered
4. Practice in the reading of increasingly difficult symbols or clusters
5. Practice in the reading of more than one difficult item in the same sentence or paragraph
6. Oral exercises designed to help learners focus on sound similarities and differences of their language: finding rhyming words, finding words with a particular sound and the like
7. Exercises in visual discrimination
8. Exercises to develop motor control
9. Exercises employing local visual art
10. Classification of letters on the basis of direction (hand movement)
11. Exercises for transition from handwritten letters to a printed form of the letters

12. Exercises for printed writing and connected writing
13. Exercises for learning the set order of letters
14. Exercises for legible handwriting
15. Exercises for silent reading
16. Exercises for words that are spelled in more than one way
17. Exercises for words that are not pronounced the way they are spelled
18. Exercises based on the identification of sets to comprehend new words encountered
19. Graded exercises for free expression, with and without cues
20. Exercises for handling different forms and content
21. Exercises for graphemic changes due to sandhi
22. Exercises for splitting sandhi
23. Exercises using sequences of visuals
24. Exercises for vocabulary development and usage
25. Derivation of one form from another: adjectives from nouns, adverbs from adjectives and verbs, nouns from verbs and so on
26. Making own sentences
27. Chronological and logical ordering
28. Expansion, shortening and splitting of sentences
29. Guided composition
30. Writing of letters, notices and the like
31. Rephrasing
32. Paragraphing
33. Punctuation.

In essence, the producer of instructional materials must be aware of the specific problems posed by each language, and provide adequate steps in the designs to account for the specific demands of each language.

The specific problems may be of the following types: problems of languages for which scripts have yet to be evolved; problems of languages which have only a recent history of writing, hence facing problems of standardization; special problems of languages which have a long tradition of writing but lack phoneme/grapheme fit; special problems of languages which have divergent spoken and written forms (diglossic conditions); special problems of languages in which a dialect spoken by the minority is considered the standard dialect and is used for written communication;

problems of languages where there is a switch from a hitherto used script to another script; problems of languages in which a regional dialect is considered the standard dialect; or problems of languages in which there is a distinction between man's speech and woman's speech.

Nepal reports that along with social and cultural problems, linguistic problems also came up while developing adult literacy materials. Maximum effort was made to strike a balance between the theoretical aspects of adult education and realities and practical aspects of village life. Linguistics was made the base while writing the adult's primer. More emphasis was laid on colloquial than on written language. The core vocabulary was drawn from the daily lives of rural people. Lines, curves and strokes were presented prior to teaching the alphabet. The language used in Arithmetic and in the adults' primer was of the colloquial form. If any difficulty arose for the learner to understand Nepali, the instructor would interpret the information in the mother tongue of the learners.

The Vietnamese case study comes to the conclusion that the syllabus, methods of teaching and the materials for teaching Vietnamese to ethnic people must be changed. If the requirement of a majority-nationality learner is largely to read and write, a minority-nationality learner needs to understand the spoken Vietnamese language. The materials must be prepared accordingly.

The following procedure is suggested. In speech drills the teacher introduces the learners to simple words and sentences, and then to difficult and complex ones, from words of concrete meaning to words with abstract meaning. When the learner has acquired some vocabulary, he is encouraged to perform on his own, carry on conversations with his classmates, with the teacher providing the models and correcting the mistakes.

In teaching reading and writing, whole information is presented. The unit is often a word of concrete meaning. When the learner can say and understand its meaning, he is asked to split it into syllables or letters. To encourage initiative on the part of the learner, and minimize the

interpretation f[illegible] Vietnamese into his own language, visual demonstrations such as pictures in the textbooks, such things as pictures drawn by teachers themselves, miniature models or the learner observing real landscapes or gestures for expression have been resorted to. Suitable provision for these has been made in the materials.

The Burmese status report indicates that there are certain characteristics of the Burmese language and its structure which require special attention in the production of materials.

Papua New Guinea estimates an existence there of 736 vernaculars. Given the complexity of the language problems in the country, it can be understood how difficult it must be for the government to embark on a literacy programme for the bulk of the population who are still illiterate. Orthographies for about 30 to 40 per cent of around 180 of the 736 are complete, but much has yet to be done. The major question here is to decide on the language(s) to be used in the national literacy teaching programme and the way of writing such selected language(s) - if it is decided that the local language(s) will be used for literacy.

Bangladesh has established certain guidelines that explicitly state the relationship between language and instructional materials. The guidelines require that all lessons must be written in Bengali. The Bengali used should be either current Bengali or chaste Bengali. Simple sentences should be used. Rarely-used words should be avoided. A list of 250 words used by different groups having local bearing was prepared. These words were used in designing and preparing books. All books were to be subject-centred, with each book on a particular subject. Spelling and letters (graphemes), as they are at present, continued. Combined letters should be used in one way only in a book.

Thailand emphasizes the language ability to use literacy skills for functional areas. The materials emphasize the use of keywords. These keywords are used to convey the gist of the lesson content, to introduce the lesson concepts, and to aid the learners in developing a vocabulary of common words.

Chapter Three

THE PROCESS OF DEVELOPING INSTRUCTIONAL MATERIALS

Agencies to be involved

The agencies involved in establishing the curriculum should be involved in the development of materials, although they may not directly write these materials. These agencies are as follows:

1. Initial survey team consisting of persons with a background in the sociology, education and linguistics of the population.
2. Governmental and non-governmental agencies (village workers, village leaders, government officials, and others)
3. Potential learners
4. Media experts
5. Sensitive writers
6. Illustrators
7. Lay-out artists
8. Evaluators/vetters
9. Printing experts.

People connected with the problem identification agency are to be included because the materials will be based on the problems and obstacles encountered by the learners. Persons connected with the problem-solving agency are to be included because the materials are intended to help the learners solve the problems they face. Inter-disciplinary experts/pedagogues are to be included because the materials are formulated in an inter-disciplinary way; the materials will cover content of an inter-disciplinary nature; the materials are to be, according to unit, grouped/organized around real problems; the linguistic components have to be connected with educational, and socio-economic components. Evaluators and vetters are to be associated to assess the effectiveness of the draft materials and to suggest improvements in all aspects of the materials. Others such as display agencies, printing and distributional agencies, the teacher in the

classroom, the other functionaries of the adult education programme and potential learners have their own function for various components of the materials.

Thus the task of materials preparation should be the joint responsibility of a team comprised of curriculum designers, linguists, communication experts, writers, subject-matter specialists and others. It cannot be a one-person job. It should also be noted that bringing all these people together does not result, automatically, in the preparation of good and efficient materials. They require training for or at least acquaintance with the whole scheme. There is always a need for training the personnel involved in materials production projects.

Ideally speaking, every adult education centre should be involved in the development of instructional materials. This is so because the curriculum for each of these centres will have to be different. The changes in curriculum should be reflected in the materials also. If this position is accepted, the following types of agencies are to be involved in the production of materials:

1. Community schools
2. Polyvalent centres
3. Centres in factories
4. Community workshops
5. Art centres
6. Centres for field studies
7. Industrial training centres
8. Farmers' training centres
9. Rural cultural centres
10. Village polytechnics
11. In-service training centres
12. National youth services.

The agencies may be nationally centralized or regionally organized. In all cases there should be inter-relation of the content under different content areas. A tentative sequence should be decided upon, keeping in view the inter-disciplinary relationship of contents, problems and the learning package. This inter-relationship will differ from place to place depending upon the nature of the learners' concerns and the priorities indicated. The objectives,

content, methodology and evaluation procedures for different groups of learners may be similar in certain respects and different in certain others.

For every group, the 'mix' of learning activities, including both the common or constant elements, and the specific or related elements, will have to be worked out appropriately. There cannot be only one approach for developing the materials. Each organization will have to evolve its own model for the preparation of materials. Imported models tried elsewhere may be costly and may not work well in the local environment.

In Pakistan there is a wide variety of organizations that are involved in adult literacy work, and which may be involved in materials production; among others, provincial education bodies, local government, social welfare and rural development departments, people's works programmes and organizations, ETV, study centres of Allams Iqbal Open University, the Adult Basic Education Society, All Pakistan Women's Organization, the Girl Guide Association and the provincial bureaux of curriculum.

In Thailand, after the functional literacy curriculum was established, a working group was formed to develop the textbook. It consisted of the following personnel: Adult Education Division officials, Thai language and arithmetic supervisors, and educators skilled in the northern dialects and aware of the living conditions of the northern people, and a varying number of resource people who assisted in writing some lessons and analysing the early drafts of the text.

In the Lao People's Democratic Republic, literacy and promotional education programmes are not the responsibility of any single organization, but are the concern of every Ministry and Organization under the party and the government from the Centre down to the regions. Curriculum and textbooks are prepared by the pedagogic educational centre of Laos after research.

In Bangladesh, for organizing training programmes and developing literature, inter-departmental help and co-operation are used. The books are written by individual

authors but are scrutinized by a team. The programme is also run and co-ordinated by a team. Writers' Seminars are arranged to help the adult education division in preparing guidelines, and also for the determination of subject matter for follow-up books.

In Afghanistan, literacy materials are being designed by an inter-ministerial team, the ministries and bodies involved being National Defence, Agriculture, Rural Welfare Department, Public Health, and several political and cultural organizations.

In the Philippines, curriculum and materials development efforts in the past have been generally centralized in Manila. Today, most of the work in curriculum and materials development has been assigned to the Regional and Division offices. This is possible when local officials are conscious of their leadership responsibilities, provided that needed funds and human and material resources are available.

In India, the major responsibility for adult education rests with the Ministry of Education. But a host of other organizations are involved. These include other governmental agencies, universities and colleges, development departments, voluntary agencies and industrial undertakings. The key unit of planning and implementation is in the form of a project consisting of 30 and more centres in a contiguous area. A project is visualized in a spirit of autonomy in matters of administration, recruitment and training of instructors, preparation of teaching/learning materials, post-literacy and follow-up activities. It is required that materials production should be decentralized and as many agencies as possible encouraged to develop materials that are relevant to the local needs and conditions.

In Indonesia, curriculum development and materials production are implemented inter-departmentally, with the staff of the Directorate General of Non-formal Education and the Technical Co-ordinating Team for Non-formal Education. The members of the team are the government agencies and private organizations such as departments of health, agriculture, industry, religion, social affairs, information, manpower, trans-migration co-operatives and women and youth

organizations. The package is formulated by the Central Government, but can be applied to all regional and religious communities.

In Papua New Guinea, voluntary and religious organizations are involved in various regions of the country. The literacy programme fully engages participants in all its aspects from class-work, reading and discussion, to literature production and selection of instructors from within their language group. It is proposed that a co-ordinating body be established preferably within the Department of the Prime Minister.

The Socialist Republic of Viet Nam reports that the implementation of the programmes for the elimination of illiteracy, and the post-literacy education for adults is a principle advocated, planned and organized by the government, under the leadership of the communist party. It is recognized that the role of the masses is important. Co-operation with other mass organizations is sought. The education branch is assisted by economic branches such as the material-supplying branch, the home-trade, commerce and planning branches.

For want of adequate resources, only some in-service complementary schools for government employees and cadres are supplied with school equipment and experimental materials by the State. It is the learner and the teacher who have lessened the financial difficulties. In many localities, the people have built schools themselves, making tables, desks, chairs, benches, though made out of bamboo and leaves of straw, in order to study. Many of the common teaching aids such as biological pictures, maps, abacuses, models, geometric and geographical patterns or structures and other common mathematics materials are the work of the skilled hands and intelligent minds of teachers and students.

In Nepal, several agencies are involved in the task of overall development of materials. The materials are developed by a team comprised of experts from various agencies. In Burma, deeply involved in the entire work of literacy are people represented by such social bodies as the Peasants' Organization, Workers' Organization, Lanzin Youth Organization and various government departments.

Analysis of the situation including need analysis

The analysis of the situation is to be pursued on the following lines: learner analysis, subject matter analysis, literacy skills analysis, problem identification and other needs analysis.

In making the learner analysis, we describe the community to which the learners belong. We select a suitable topic which fulfils an important need of the community. This procedure begins with outside sources of information and moves to the inner circle of learners: (1) study of the documents related to the developmental goals and problems of the community, (2) interview of experts in the region, (3) interview of community leaders, (4) interview of average learners and (5) seeking the reason for each of the problems (lack of resources, lack of motivation, lack of skills and knowledge). We find out what the learners already know, their knowledge about the subject matter, their ability in the language, the attitudes they have, and their methods of learning.

Under subject matter, we want to know what skills and knowledge the learner already possesses, what type of occupational training the learner has, and what possible misconceptions the learner is likely to have. Under the heading of language, we want to know the number of the special words that the learner already knows, the learner's level of reading and writing, and the style of language that the learner prefers. Under attitudes, we wish to know whether the learner understands the need for the subject, whether there is any obvious relationship between the problem and the solution. Under learning methods, we raise questions of the following type: Is the learner familiar with books and note-books? Does the learner have any preferences about different types of learning?

There are many factors which have a direct bearing on the successful teaching and learning of literacy. Some of these are as follows:

1. The teacher, his (or her) age, sex, teaching experience, proficiency in the language he is teaching, knowledge of the grammar (defined as a system of rules in vogue in the language) he is teaching, his attitude towards the students and his attitude towards the speech and culture.

2. The student, his (or her) age, sex, knowledge of other languages, previous literacy training, motivation and interest, aptitude for language study, attitudes towards the literacy he is learning and the culture represented by it, attitude towards the teacher and the method employed in teaching the language and testing, his preference of medium. (Some students are found to learn to read better than to write; some students are found to write better than to read. Such individual styles may also contribute to the quality of language learning).

3. The types of methods. There are many methods of language teaching, but no single method is effective for all purposes of language teaching. Accordingly the teacher must be able to select and combine several methods to achieve better language learning by his students. In particular, the types and length of drills and exercises, what kinds of explanation we give and where such explanations are given, how we supply meaning, and how we proceed from one item to the other will have a direct bearing.

4. General factors. These include the sociological environment in which instruction occurs, attitude of people around the learner and his fellow learners towards literacy acquisition, for how many hours literacy is taught, the frequency of teaching periods, whether literacy is taught regularly or at irregular intervals, the size of the class, time of meeting classes and so on.

Subject matter analysis begins with the conversion of the community need into a statement of the instructional task in terms of the behaviour of the learner. This task is divided into a set of learning activities. Subject matter analysis is checked to make sure that it is complete and does not contain any unnecessary or repeated activities. The learning activities are then arranged into a suitable instructional sequence. Test items are written to measure the attainment of each activity in this sequence.

Literacy skills analysis includes analysis of language to be used in the programme. It generally deals with reading, writing and some basic arithmetic skills. The type of literacy skills to be taught determines the programme. For a community of illiterates, the programme has to be mostly pictures.

For semi-literates, it can use a larger vocabulary and more complex sentences. A literacy skills analysis enables us to choose the best type.

Literacy skills analysis enables us also to locate words and sentences to be used for teaching the subject matter. It also helps us to identify the generative words. The literacy skills analysis begins with the selection of a general language objective based on the level of the learner. Specific objectives for sight reading, word attack and comprehension are next chosen. Samples of the vocabulary and sentence patterns used in the teaching of the subject matter are collected and analysed into various verbal, pictorial and symbolic elements. The materials producer is advised generally to follow these steps:

a) Select a general literacy objective based upon the level of the learner,
b) Select specific objectives for reading, word attack and comprehension skills, and
c) Record and analyse the language used by learners.

Problem identification. This may be pursued on at least three levels. At the linguistic level, choice of language/dialect, content words, structural variations, reading, pronunciation and language goals in relation to skills and the levels of attainment required in each skill are involved. On the non-linguistic side, curriculum-based content goals are considered. At the learner-oriented activities level, the specific difficulties faced by individuals in the learning process are studied. In other words, problem identification relates to the problems inherent in learning tasks, learner's individual difficulties and administrative and organizational difficulties.

Problem identification - elaborating the problem

a) Broad subject area
b) Specific problem
c) Analysis of the problem
d) Objectives
e) Contents - elaboration of educational needs to adopt the remedial measures to solve the problems
f) Obstacles in solving the problem

g) Lead questions for discussion
h) Remedial measures
i) Media to be used
j) Time required

Need analysis

Individual needs
Group needs
Defective existing materials
Non-availability of suitable materials
Non-availability of a variety of materials
- Contents
- Skills
- Media (visual, etc.)
- Goal
- Language
- Dialect
- Switch-over materials
- Fast learning materials
- Auto-instructional materials
- Semi-auto-instructional materials
- Form and medium preference.

The Indonesian status report identifies the available learning resources in the form of natural resources, cultural resources, social resources, financial resources, activities or attempts of institutions which provide service to society at the village level, individual learning resources (that is, people who have certain knowledge and skill and are able to induce the teaching/learning process), various reading materials such as books, newspapers, pamphlets, posters and leaflets, and radio and TV programmes.

The Indian analysis of the situation calls for unprecedented effort for launching large-scale action, for co-ordinating programmes, for establishing infrastructure, maintaining diversification of curricula and preparation of good quality teaching/learning materials, for training the cadres and in providing the logistic arrangements for a nation-wide effort. This has resulted in a set of wide-ranging activities of the following type: development of materials for farmers' functional literacy programme, development of materials for polyvalent adult education centres for workers in organized and non-organized sectors, materials for out-of-school youth, materials for illiterate mothers under the Integrated Child

Development Projects, and problem-centred materials for various professional groups.

Some of the special programmes and materials based on situation analysis in the Philippines use the following: utilization of Madrassas in the Mindanao region for literacy and enlightenment along New Society Goals; barefoot teacher's scheme utilizing soldiers to teach literacy in disturbed areas, programmes for language minorities, and projects directed to out-of-school youths and jobless adults who have urgent need for skills-training needed in the locality. There are also materials meant for those who cannot meet with organized groups. These are self-learning kits and modules.

In Afghanistan, materials and programmes for out-of-school children, school drop-outs and women have been worked out for both rural and urban areas. In Thailand, it is found that illiteracy is highest in regions and areas where poverty prevails. This identification has led to suitable changes in materials and their presentation.

Setting up objectives

Broadly speaking, there are two types of objectives: (1) Literacy-skill objectives and (2) Goal-oriented objectives which are to be achieved while imparting literacy skills.

The technical objectives can be translated into training objectives, that is, they can be expressed in terms of technical and vocational skills, ability to communicate, knowledge, working habits and attitudes. Literacy skills for the programme may be elementary or complex depending upon the level of the learner. After determining the level of the learner, we focus on reading skills suitable at that level. We then select a set of words and sentence patterns which fit both our learner analysis and subject matter analysis. These form the linguistic basis of the material.

Sample of literacy objectives

The following adult literacy course is meant for mother tongue speakers. It is assumed that the learner has control over the spoken language, and can use it with some facility. What the course aims at is mainly reading, writing and composition in the language. Different styles and registers

(occupational varieties) in language use have also been indicated. The course is developed keeping in view the composite nature of the classes - different age ranges, mixed abilities, different socio-economic backgrounds, and so on. The whole course is worked out for 132 hours, comprising 33 hours for each level.

Level I

Objectives. At the end of the level, the learners will be able to

a) recognize letters in isolation and combination,
b) read with comprehension words and simple sentences,
c) write words and simple sentences, and
d) write short compositions in the language.

Level II

Objectives. At the end of Level II the learners will be able to

a) report on an incident or narrate orally,
b) reproduce in writing from a spoken narration,
c) summarize a story or discussion both orally and in writing, and
d) communicate through letters to a specified category of persons on specified topics.

Level III

Objectives. The learners will be able to

a) read fluently with comprehension, and
b) appreciate formal style.

Level IV

Objectives. At the end of the level, the learners will be able to

a) write fluently on a given topic, and
b) participate in acting and role playing.

The objectives with regard to the skill acquired and the sequence in achieving the skill may be presented as follows.

Instructional materials development

Under Level I, for the skill-category recognition and recall, the sequencing may be as follows. Identify letters that have similarity in shape and form them into groups of letters. These groups of letters may be further graded on the basis of the number and complexity of hand-movements involved and presented to the learners one by one. The secondary symbols used to indicate the vowels in combination with consonants may be identified and introduced along with the primary form of the vowels. With their introduction, identify also the difference in sound values caused by preceding and/or succeeding letters, changes in sound values of the letters in different positions of their occurrence, and changes in sound values due to other causes.

Reading is an integral part of the writing of the letters - first imitation in pronunciation and hand-movements. After a group of individual letters is introduced, the objective should be to present them in words, and sentences wherever possible. The choice of words and sentences may be guided by the content determined by the curriculum. After the mastery of the individual letters, conjuncts and geminates of letters will be introduced for reading. The other objectives would be as follows:

- Introduction of new words
- Word making
- Sentence making
- Words and sentences given for evaluation
- Simple letters for directional indications
- Two-letter words
- Three-letter words
- Words with secondary symbols
- Words with clusters
- Sentences
- Dictation: words, sentences
- Reading - short, simple passages, comprehension exercises.
- Composition - constructing sentences from given words, and description of given pictures
- Typed lessons for listening with comprehension
- Newspaper extracts for reporting and summarizing
- Rhymes and recitation
- Letter writing
- Patterned spelling

- Recorded speech for listening and summarizing
- Miscellaneous letters and petitions
- Applications
- Guided composition
- Literacy pieces
- Sets of picture sequences
- Stories told by teachers for writing
- Situationally controlled conversations.

Each level has a set of three or four instructional objectives. All activities envisaged in the materials pertaining to this course are centred around these objectives. The skills concerned with the objectives correspond directly to the specific objectives for each level. In order to achieve these objectives, each skill category has been estimated to have a sequence of learning experiences which have been reflected in the material.

In order to have materials developed under these schemes, information with a topical focus has to be given. If the material is already developed, this may not be directly useful to the teacher, but the information would still be useful for remedial teaching or enrichment courses as the case may be. Also, if it is felt that if the materials fall short in items in the learning sequence, advantage can be taken of the items listed under topical focus. These sequences given in the format need not be interpreted very rigidly. The sequence may be changed if the teachers feel that any other order of learning experiences may be more useful. Only major learning experiences have been listed here. If the teachers feel like introducing a few more learning experiences, they should do so under the format suggested and within the time limits.

Some illustrative examples from the countries of the region may be presented here. In Thailand, the following objectives have been set up in the preparation of materials: emphasis on content relevance (the text was developed placing paramount importance on content. From the moment the adult learners began their studies they were faced with lessons which included discussion problems. Such content <u>was not</u> put aside until the learners had mastered the ability to read the letters in isolation and in combination), emphasis on each lesson being a self-contained unit (the components of

these self-contained lessons are keywords, reading passages, language skills and arithmetic lessons related to the particular knowledge or concepts covered in the lesson), related Thai language and arithmetic components.

The textbook is made from separate cards (to avoid overwhelming the learners by presenting them with a thick book that appears formidable, to motivate the learners to attend classes regularly so that they can add pages to their book, and to allow for easier text revisions, additions, or deletions depending on local needs), and use of pictures to introduce the lesson or concept.

Under the National Adult Education Programme in India, adult education is aimed not only at the acquisition of mere literacy and numeracy skills but also at functional development and creation of social awareness with a view to creating a will and skill among learners to transform society. Accordingly the materials aim at presenting these objectives.

Information about new ideas, reinforced by demonstration of skills and actions, is an essential requisite of materials. It necessitates an integration of visual pictures, printed words, audio-visual aids and demonstrations in the curriculum of one and the same set of reading/teaching materials. The functions of the book are envisaged as three-fold: to motivate the adults to discuss their problems, to make adults conscious of the broad concepts related to the problem areas and to serve as a key to learn alphabet, keywords and sentences. The Indian case study further reports that the level of literacy to be attained through the problem-oriented literacy materials will be determined by the nature of the problems and the related developmental activities in which the learners will be involved.

In summary, the objectives of materials may be set up bearing the following in mind:

1. The material should lead to the achievement of the main goal of the programme.
2. The core of each unit should be centred around the problem, task or operation.
3. It should aim not only at knowledge delivery, but also at the promotion of understanding of social and natural phenomena, development of the scientific spirit, attitudinal changes, strengthening of motivation and readiness for action.

4. It should initiate the learner into logical, mathematical and scientific thinking and assimilation of new concepts and inter-relationships, and reading and writing skills until he or she is able to enter into an autonomous process of learning and communication using the written word.
5. It should ensure close correlation between the operations and the learning content, between the operation's schedule and the learning schedule.
6. It should represent an approach that integrates problems and the learning situation, theory and practice, and the reading and writing skills and operations.

Organization of the materials

One may prepare a variety of materials, in addition to initial primers. Some of these are special-purpose materials, restricted materials, supplementary materials, conventional materials, materials for correspondence courses, materials for self-instruction and materials for non-formal education. Some materials focus only on specified skills and specified language structures. Each instructional situation must be carefully studied and materials prepared.

Some basic principles and characteristics of materials production are as follows:

1. From the known to the unknown
2. From the simple to the complex
3. From the concrete to the abstract
4. All material should be properly graded by structure and content
5. The content and the structure should be useful to the learners and be consistent
6. All materials should have their own evaluatory schemes
7. The materials must reflect the curricular and national goals
8. The objectives of the materials, content, and structure, follow-up activities and evaluation should be properly inter-related and integrated
9. Behind every kind of material there is a theory; the design of the material will depend upon theoretical assumptions.

Organizational structure of lessons may differ with the progression of the literacy course. Initial primers may have only visuals and words denoting the objects/events represented by the visuals. Later on, a general order of the following type may be used:

1. Title
2. Visual
3. List of vocabulary (new/difficult ones)
4. Body of the lesson (length of the body, length of utterances within the lesson, running-over of sentence, punctuation, paragraph, linkage between the utterances, and the like)
5. Exercises based on skills: guided, free, and evaluatory.

The gradation of lessons, would be made linguistically, and contentwise, on the basis of the chronology of the events and learners' interests. Each lesson or group of lessons should be brought under an evaluatory scheme/review lesson. This evaluatory scheme should reflect the weightage for individual skills, specialized expressions, different contents, different forms, and number and types of vocabulary.

Teaching aids must also be viewed as part of the instructional materials. Teaching aids may be prepared for specific contents and specific linguistic items. They are used to stimulate interest, to help a complete mastery of the lessons, to test the learner's mastery of the lesson and so on. Teaching aids must be based on curricular goals, and content of the lessons so as to meet the requirements of the items of a language. We should go in for inexpensive, easily procurable and a specifically relevant (to the content and language items) teaching aids. For instance, flash cards are easily prepared, and are very useful for recognition of words and sentences and letters, for answering a question by using a card from a group of cards, for matching sentences/words/letters with pictures and for matching phrases to make pictures.

A decision the author must take is the organization of materials within the book, and from book to book in the series. Within the book, it is a common practice in many countries to have the contents organized in units. There are units on specified topics. Within each unit are several items/lessons dealing with the topic. This organization makes

it possible to pursue a topic in depth. It provides for repetition of words, and relates the content of the book to the curriculum. The variety of topics within the book will be based on the curriculum. The materials producer must be clear about the major goals of teaching these subjects. Each of these goals is to be translated into well-organized materials. Each goal is to be assigned an effective style of presentation. Some may require an expository style, some a story style, and others quite different styles.

An important decision to be made is on whether the questions and exercises must find a place in the textbook itself. If the questions and exercises are in the book, the learners and teachers are certain to use them. If they are given only in the teachers' manual, they may be easily skipped over by the teachers. The materials may also contain suggestions for further activities and reading. They may also contain tests and vocabulary lists (preferably a glossary of difficult-to-spell and not-so-familiar words).

Depending upon the resources available and the analysis of the situation, letter cards, word cards, charts, readiness tests, achievement tests, flannel boards, work book, record book and other things may also be prepared. Some games to reinforce what is learned, and materials for independent and group work may also be prepared.

A question that should be raised and answered is that of how much and what kinds of materials would be written by the author, and how much and what would be chosen from other sources for inclusion in the book. Generally speaking, the beginning primers have to be written, whereas materials for free reading may be taken from classical, folk or other sources. Here, the quantity and kinds of selected materials will depend on the level of attainment of literacy skills by the learner, and on the complexity of content and style of these selections. When including selections from others' writings, the author must seek the help of numerous people. He must comb the literature with the assistance of others to see what selections would fit the unit/topics and levels of difficulty, and would be in keeping with the values to be promoted and information to be conveyed.

Another question relates to the number of new words to be introduced in each lesson. Some have suggested, for English,

one new word per hundred words already known in a running text. This number has to be decided arbitrarily for each language on the basis of a number of variables such as the familiarity of the content, indispensability of a particular word for expression of certain ideas, derivational history and length of the word, native/foreign/colloquial source of the word, stylistic differences, and so-on.

As learners master words for themselves by sounding them out, studying their structure, and discovering their meaning partly by their use in sentences in which they are introduced and repeated, more new words can be introduced. Contextual facility may be exploited for the introduction of new words. It is worth stressing that a new word must be seen in many contexts before it becomes established in the learner.

Another point with regard to the organization of the materials revolves around the skills to be taught through the materials. This has to be decided in consonance with the curriculum and the objectives set for the materials. Once the skills are decided upon, the order in which they should be developed must be identified. What are the gradations of difficulty in developing a skill and how are these gradations to be reflected in the materials? Which skills require which other skills? (Note also that many classroom experiments will have to be tried before the answers to these questions are given).

After decisions are made on the number and kinds of skills, and their sequence and their gradation, the methods of teaching them have to be looked into. The teaching methods and the materials to be taught have very close relations with one another and influence one another. Answers to questions such as the following have to be sought: How do people learn, what do they mean or know about learning, what do they do as they learn, do they learn ways of self-instruction, do they learn to think for themselves, and to draw their own conclusions?

These questions lead us to a discussion of the kinds of learning experiences that should be presented in the materials and the organization of these learning experiences in the materials. We must, first of all, make a distinction between early learning experiences (and the materials for these), and the content proper (and the materials embodying

the content). The early learning experiences and the materials giving these experiences must be considered preparatory for the acquisition of content and skill.

After the early-learning-experience materials, the materials for the practice of behaviour implied by learning experiences proper will be presented. This experience, as we have seen, should be appropriate to the learners' present attainments. We should recognize that there can be a number of different experiences to attain the same objectives. Hence there can be many different kinds of instructional materials. The same learning experience will produce several outcomes. Hence the same instructional materials can produce several outcomes. The intended outcome must be highlighted through appropriate organization of an exposure to materials.

We should organize the materials in such a way that the information is obtained as a part of the understanding of the totality of the materials or the sections of these materials, instead of being only an act of memory. Throughout the materials, we should emphasize only important information worthy of remembering. We should structure the materials in such a way that the intensity of impression and the variety of impressions of the information increase the likelihood of retention of this information. The important items are to be used frequently and in varied contexts. The learning process involves re-organization of information in varied ways appropriate to different contexts in which the information is used.

How do we organize the materials for effective instruction? Changes in learners' behaviour develop slowly - through a cumulative process. Hence the contexts must be organized so as to reinforce each other. Organization of materials may be viewed in terms of space and time: continuity (time and the specific kind), sequence and integration. Sequence emphasizes the importance of having each successive experience build upon the preceding one. Sequencing should apply also to the question of depth and breadth. In sequencing, duplication is not emphasized. Sequencing emphasizes higher levels of treatment with each successive learning experience. The horizontal relationship between the elements taught is achieved through appropriate integration. For this, we should identify the elements which serve as the organizing threads.

The organizing threads are better woven if there is agreement upon the general scheme and the general organizing principles. There should be agreement also upon the choice and structural composition of the smallest unit and its sequential relation with other units in arriving at a larger whole. A progressive and cumulative increase in breadth of application, in the range of activities included, in content and language skills, analysis following description, and specific and clear illustrations should be carefully planned.

Yet another consideration that should govern the organization of materials is the audience for whom they are intended. Instructional materials may be intended to be used by learners, to be used by teachers, and to be used by learners and teachers together. Each one of these demands a different organization of the content and introduction of different activities.

Some of the elements of better organization are comprehensiveness without irrelevance (comprehensiveness as the level of skill required to function in a particular system at a particular level), ordered arrangement of elements, integration of elements to lend unity to the whole, and adequate coverage of the dimensions of the subject matter in terms of its relationship to everyday life. Of these, development of subject matter is the crux of the problem, as decisions with regard to it will affect all the other elements of the organization of materials.

Ideally speaking, the development of the subject matter should involve the identification of the extent of knowledge of the subject matter in the individual, the investigation into the facets of the lives of people, other information related to people and area, the developmental problems obtained through official and non-official sources, identification of themes, breakdown of the themes into topics of progressively-increasing complexity to arrive at unified wholes and linkage within and across lessons.

We may also look at the organization of materials as systems, as either a comprehensive or a progressive system. The comprehensive system consists of preparing all the teaching materials required for functional literacy and then dividing up their contents into monthly, weekly and daily

sections. The materials are then tried out and reproduced in corrected versions. In the progressive system, the preparing and testing of the teaching materials is carried out in stages. The subject matter is divided up into sequences generally designed to last a specified period, and is presented so as to be in consonance with the day-to-day activities of the learners.

In essence, in organizing the materials certain principles should be followed. These include the following - that the subject matter be of interest or concern to the participants, that the complexity of the subject matter be identified and sequenced appropriately, that the chronology and logical order of the subject matter be kept intact and exploited. Further, the medium or media of communication, the form of presentation, the order in which the various elements of subject matter are to be presented to the groups and the amount of subject matter to be conveyed to participants are to be considered.

If the materials in the series include such things as charts, cards or posters, to be read by a class at a distance, the size and type of pictures must be carefully chosen so that the pictures can be read easily at a distance. The colour of the paper and the print, the size and the style, word and line spacing, the types of letters used, space between running lines, the manner of splitting the sentences, phrases and words and the use of punctuation are all to be looked into.

The present practice is mainly governed by intuitive feelings and past experience. Research is conspicuous by its absence. The placement and number of visuals, their role in the communication of information intended, and in the imparting and evaluation of literacy skills have been well recognized, although the fit between the style of visuals and the cultural surroundings of the learner population has only recently been given the importance it deserves.

Consistency in printing the letters and lines must be maintained. That is, the words should not be spread out with variant spacing; all lines should be of equal length. The number of pages that a primer should have is to be decided

carefully, taking into consideration the characteristics of the learner population, resources available, content to be covered and the like.

In summary, the layout of the materials is the job of a team of experts. While the content of the material influences the organization of the materials including the layout, the layout itself must be designed well in advance before the completion of the preparation of the draft materials. Important changes in the organization of materials, including the layout, are often found to necessitate changes in the content itself. What is important is to bear in mind the inter-relationship between the two while preparing and organizing the materials.

The Philippines identifies several approaches for the organization of materials. The curricular approach utilizes the content and experiences that are well organized and properly sequenced according to difficulty. It utilizes formal teaching techniques, facilities and equipment as in formal schooling. In the direct approach, people are taught directly by mixing and working with them. A distinction between micro and macro approaches is also made.

In one method of organization, the teaching of reading and writing is done by teaching the sounds of the letters of the Roman alphabet initially, instead of their names. The sound of the letter 'm', followed by the sound of the letter 's' is introduced as the first two lessons. The sounds are associated with objects common or familiar to the participants. The vowel sounds are taught next. Later, sounds are combined using dotted lines to form syllables, which in turn are combined to form words.

In another method of organization, reading and writing exploit the keyword syllable method, with a phono-syllabic approach in the presentation of the lessons. Picture words are used in introducing a new lesson. Syllables are formed from a combination of two or more letter sounds. Basically, the letter-sounds to be taught are pronounced continuously in preparation for reading connected syllables. Drills are given in every lesson for mastery; enrichment activities in the form of songs and short stories are added. Dotted lines are used to indicate the letter-sound combinations to form

syllables. From a combination of syllables, learners form simple words, phrases, and eventually sentences and short stories using two or more syllables previously mastered.

Afghanistan applies the structure-global method of organization of literacy materials. The main feature of this method is that-at the very beginning - the learners face complete meaningful messages, out of which they are asked to identify some elements. At the beginning, the elements are words taken out of meaningful sentences, and later on, graphemes are identified. It is claimed that this method suits the languages of Afghanistan, as they present a close correspondence between sound and letter, and phoneme and grapheme. It is further claimed that this method has allowed the designers to integrate language progression into the main core of socio-political contents.

In Bangladesh, the organization of materials revolved around a list of 250 words which are used by different groups. These words are used in designing and preparing the books. In general, the reading materials used in the primers and other supplementary books reflect the objectives of enabling the illiterate masses to read, write and calculate, making the adult illiterates employable and more productive, and of helping them adopt a rational attitude towards population control and family planning.

The two recent primers include lessons on simple arithmetic. They also include topics on poultry, co-operatives and farming. These may help in achieving the first two objectives. Originally the alphabet was presented first in the materials, but now the visuals are given first. In the recent primers, the alphabet appears at the end of Primer I. The contents of the books have been organized logically and psychologically, because primers start with simple and known words gradually going on to more difficult words in succeeding books. There is vertical integration of facts in the primers. The major curriculum elements are reiterated in succeeding books. This is found to be advisable for reinforcement of desirable concepts and skills.

In Lao People's Democratic Republic the reading materials in literacy consist of 44 texts. The texts are so organized that if one learns the contents of the book regularly

for two hours each day, it takes from three to four months to become literate. Mathematics is not taught in literacy classes, although numerals from 1 to 1,000 are taught.

In Thailand the principles of organization of the textbook are as follows: (1) emphasis on content relevance, (2) a self-contained unit as each lesson, (3) relation of Thai language and arithmetic component, (4) separation of cards in the textbook, and (5) the use of pictures to introduce the lesson or concept. The Adult Functional Literacy textbook consists of a series of self-contained units which cover specific problems or ideas. A unit describes conditions faced by the target groups and poses problems that these conditions might cause. It is the responsibility of the class to determine whether or not the problems posed are their problems, to identify other problems that may arise from the condition or situation, to note the beneficial aspects of these conditions and, finally, to decide on alternative solutions (if necessary) to the problem in their group discussions.

The textbook is divided into four subjects (agriculture, health, economics and civics). The following steps are envisaged: use of photographs and drawings to illustrate the lesson concepts, study of keywords to introduce the concepts (keywords convey the gist of the content of the lesson, introduce the lesson concepts, and aid the learners to develop a vocabulary of words commonly found in printed matter in rural areas), posing issues and questions to stimulate discussion (the issues are not presented in the learners' lesson cards and are found only in the teachers' handbook), breaking learners into small groups for discussion, and enabling learners to find their own solutions. The keywords are then drilled and memorized. The reading-drill passages offer further practice of the keywords and are designed to develop the learners' ability to read simple sentences. Their content provides information related to the issues discussed.

The reading passage is found on the reverse side of the lesson card containing the photograph or drawing. This passage contains the keywords found under the picture and information concerning the problems or possible solutions to them. In order to help the learners to remember the keywords, the passage contains these words in the first two or three sentences. In the subsequent sentences there are blank spaces

where the appropriate keywords, selected from a list, are to be filled in by the learners.

The next part of the lesson is the writing exercise. A variety of teacher-guided drills are used throughout the text. The vocabulary used in these exercises includes emphasis on the keywords of the lesson. In the later lessons, questions and answers related to the information and, often, solutions contained in the reading passage, are presented. The last component of each lesson concerns basic computation skills. Once basic skills in addition, subtraction and so forth have been drilled, the lesson would include problems. The vocabulary, and often the substance of these arithmetic problems, are related to the keywords and subject matter used in the early parts of the lesson. Many of these exercises are now structured along the lines of those found in programmed texts. The learners receive separate workbooks containing these drills at present, but will soon receive the numeracy exercise on cards to be included with the other lesson components in their basic text.

Burma has set down the following guidelines for the organization of materials. The subject matter of each lesson in the textbook may be of such a nature that there is no need to explain these to the adult learners, as they have already had the necessary knowledge pertaining to their way of life. The content of the reader must be such that it does not include anything that has no direct relationship with the everyday life of the adult learners. The lessons must be written in simple sentences and the vowel-consonant combinations must be introduced by stages.

In Nepal, lines, curves and strokes are taught prior to teaching the real alphabet. Easy structures are followed by the complex ones.

In the Socialist Republic of Viet Nam teachers have devised a 25-lesson programme taught by the direct method. The learner, right from the first class-hour, learns the short texts he has already heard and learned by heart as popular songs and popular poems. With these the learner identifies the written words, connects spelling and syllables, and quickly acquaints himself with written words which, at the same time, interest him if useful and interesting texts are chosen.

Instructional materials development

In Indonesia, a package approach is pursued. The elements/books of the package are organized in the following manner:

Package A1 to A3	: To exercise writing skill by duplicating with thin paper attached to the learning material. Structural, analytical and synthetic (SAS) methods used for Package A1 to A3. Structural - to start with writing sentences. Analytical - the sentence is analysed into words. Synthetic - letters become syllables and words become sentences.
Package A4 to A10	: Advanced exercises.
Package A11 to A20	: Skill training, arithmetic, and the study of Bahasa Indonesia in greater depth.
Package A1 to A20 needs a tutor	: Collective study programme is the effective way.
Package A21 to A100	: Practised by self-study according to each individual's interest. They can also be practised by collective study.

Package A is in the form of a 24-page book. The package consists of 100 different titles. Each package is an all-inclusive system, in which the policy, the educational objectives, the curriculum and the teachers' manual are all in one single unit. The package system is very much like a programmed learning system. One characteristic of programmed learning is the existence of gradual stages in the process of learning to reach a given aim. Package A begins with the introduction to the alphabet and then extends to the mastery of reading and writing. It also gives the learners materials which function as the follow-up literacy practice materials, and then it provides 80 booklets which serve as a popular library.

The Indian status report says that the materials produced in India are extremely abundant and diversified, that the dichotomy between traditional and functional literacy has steadily been reduced, that adult education curricula and materials are no longer centred on pure sound - symbol analysis or on a mechanical fixation process and that conscious

efforts have been made at integrating literacy with development activities. The Indian case studies indicate the availability of a wide variety of materials such as discussion books, workbooks, content sheets, visual aids and follow-up materials.

Draft formulation

The following elements or actions may be taken into consideration, in the sequence shown.

1. A clear conception of the subject area.
2. Decision regarding the audience for whom the material is intended.
3. Problem-identification survey to arrive at the educational needs.
4. Information to solve the problems.
5. Derivation of curriculum based on problems.
6. Decision on the mode of communication - spoken, visual, written.
7. Decision on the type, form and style of writing.
8. A clear conception of what is to be written.
9. A clear conception of the objectives of writing, readers' expectations, capabilities, roles and needs.
10. Preparation of the structural plan of the material.
11. The actual writing act - arranging the chapters, headings, sub-headings, good beginning and appropriate ending, reference materials, paragraphing, punctuation, length of sentences, vocabulary control, introduction, practice, drills and exercises and the like.
12. Clear readability appropriate to the level of the learners.
13. Examination of the style - to relate oral communication to written communication mode; explicit and straightforward expression; concrete examples, anecdotes, a variety of forms of literature to be employed.
14. Illustration of the materials to help understand the communicative intent, and also for assessing the attainment.
15. Checking the manuscript with technical experts.
16. Revision of the manuscript on the basis of the suggestions by technical experts.

17. Pre-testing of the revised draft.
18. Further revision of the draft on the basis of the findings of the pre-test.
19. Preparation of the press copy.

Indonesia follows the following steps in the process of development of materials: (a) identification of learning materials, (b) concept design, (c) tryout, (d) revision, (e) production of prototype, (f) testing revision, (g) lay-out, (h) proof production, (i) correction, (j) production, and (k) distribution. Manuscripts for Package A have been prepared in the following ways: (1) Collection of existing learning materials from various government departments and agencies relevant to Package A. Many such materials have already been collected by the directorate, (2) Manuscripts prepared by various government departments and agencies in the field of their expertise as it relates to Package A, (3) Manuscripts obtained through a nation-wide competition prepared in accordance with the guidelines for Package A, (4) Workshops organized by the NTCC Secretariat to prepare manuscripts on the subjects for which not enough materials are obtained through the above sources, (5) Various government departments and free-lance writers, illustrators and communicators invited to help in the writing-up of manuscripts.

The Thailand experience shows that the process of preparing the text was much more difficult than the process involved in constructing the curriculum. Considerable debate surrounded almost every step in the development of the lessons as theories and approaches clashed over matters concerning keywords and vocabulary selection as well as sentence construction and length. Draft formulation was governed by the principles already stated under the heading Organization of the materials.

In the Philippines, curriculum workers and NFE field workers were convened to prepare modules for citizenship training and other materials. A list of topics which the workshop participants believed important for the target clientele to know for good and effective citizenship was first drawn up. Each participant then worked on an assigned topic. The characteristics and needs of the target clientele were kept in mind as each participant wrote the module. Also considered basic in the preparation of instructional materials

were behavioural objectives, task analysis, instructional sequence, and lesson presentation.

In Afghanistan, group discussions constituted a major technique in developing the materials and implementing the literacy programme.

The Bangladesh experience shows that it is easy to write books for educated people but it is a Herculean task to prepare books for illiterates and neo-literates. In Bangladesh the method used in materials formulation is as follows: a list of 250 words commonly used by the people of different parts of the country was prepared. Initial and supplementary materials were prepared with words from this list. A writers' seminar was held to decide the priority list for preparing the follow-up reading materials. These materials were published and distributed at the national level by the Adult Education Division of the Ministry of Education, but in preparing these materials, other departments and bodies such as Agriculture, Public health and co-operatives helped a great deal. The materials were prepared by individuals but scrutinized by a team. Initial reading materials were produced in bold type. The supplementary and post-literacy reading materials were produced in 18-point type.

Certain facets of draft formulation can be illustrated by reference to a case study in India on the development of a primer in a dialect spoken in Jaipur district. Observations in the field and discussions with farmer learners convinced those responsible for materials development that a primer using the words, sounds, idioms, phrases and even the slang most commonly heard among the people would give a touch of intimacy that would lead to successful learning. It was felt that such a primer would initiate a practical dialogue, ensuring the involvement and participation of the learners and their consequent motivation.

A writers' workshop was planned for developing this primer. Those involved in adult education, particularly in Jaipur district, and experts in primer development were invited. Some supervisors of adult education centres in Jaipur district were also invited. The leading role was to be played by the Project Officer of the Farmers' Functional Literacy Programme in Jaipur, and the Youth Co-ordinator of Nehru

Yuvak Kendra, Jaipur. Writers and other participants in the writers' workshop were given background materials telling them the fundamental principles of materials preparation and also about the steps involved in it. The check list of various steps involved in materials preparation given in the background materials was as follows:

1. Have a clear concept of the environment and subject area.
2. Decide about the audience to whom the materials are to be addressed.
3. Conduct a problem-identification survey.
4. Collect information to solve problems.
5. Elaborate a curriculum (based on problems).
6. Decide about communication method - spoken, visual, written.
7. Decide upon the style of presentation.
8. Prepare format and layout plan of the material.
9. Think of a good beginning and a good ending.
10. Take care of reading ease.
11. Illustrate the material.
12. Re-check the manuscript with technical experts.
13. Prepare a second draft in the light of suggestions from experts.
14. Pre-test the revised draft.
15. Improve the tested draft.
16. Prepare press copy.

Participants of the workshop thoroughly discussed these steps. They then discussed all aspects of the available materials. The preparation in advance prove useful, as it was decided to build upon what was available. Agreement was arrived at regarding the fundamental principles of materials preparation - which were given as tips in the background material. These tips were as follows:

a) Alphabet: The letters should be introduced in the order of their simple-to-write features, and not necessarily alphabetically; introduce first the most used and useful letters of the alphabet; such letters of the alphabet permit the building up of problem-related words. Do not use similarly-shaped letters of the alphabet too early.

b) Words: Use words which provide drill for the letters of the alphabet already taught; do not use reversals (e.g. tog, got) together; avoid word breaks; introduce words in a controlled manner.

3. Keywords: These should introduce new linguistic elements (consonants, vowels) to be taught; they should be visual and graphic and provoke thinking about a problem. Do not introduce more than two new words in each of the beginning lessons; repeat each word at least five times; as early as possible, add action verbs and those which help to build useful phrases and sentences.

4. Sentences: These should be problem-based, should be introduced as early as possible, should lend themselves easily for drill of words and should be woven into a well-knit presentation.

5. Key-sentences: These should introduce keywords which contain the themes of the problems.

6. General requirements: No linguistic element should be left untaught; punctuation marks should be introduced very gradually but not too late; numerals may also be taught along with the lessons.

7. Teachers' guide: This should essentially accompany the primer; it can be prepared separately or may be included in the Teacher's copy of the Primer; it should contain detailed information about teaching methodology.

8. Approaches to primer construction - (1) Synthetic: letters of the alphabet are introduced first; words and sentences are taught afterwards; (2) Analytic or global: a sentence is introduced, followed by its analysis and break-up into words and letters of the alphabet; (3) Eclectic: combines synthetic and analytic approaches; keywords are introduced first; they are broken down into letters of the alphabet; new words and phrases are built with the help of these letters of the alphabet; they are woven into sentences.

A consensus was arrived at that an eclectic approach is often the best, and it was decided to derive the keywords from key sentences. The key sentences would generate discussion and create curiosity in the learner's mind.

The other idea or assumption was that the oral repetition of keywords in discussion would help in making them sight-words and that this would further facilitate imparting literacy skills.

The records of the field study were made available to the participants. These field observations included information on the local problems and local culture as well as a comprehensive study of Dhundhari syntax, most frequent Dhundhari sounds and words. This knowledge helped the writers to select the appropriate words and form problem-based key-sentences.

But some creative writers participating in the workshop pointed out that primers and other materials should first be interesting and entertaining. They should give new life to the 'dying men' within the rural learners. These writers, therefore, wanted to give writing a cultural-force. They also wanted the primer and other learning materials to work as a bridge between rural and urban. The writers insisted that our materials should not keep them aloof. The villages should come closer to the cities in the contemporary culture. The distinction should not widen the gap, but should function as a close link between the two.

The writers had observations also about the dialect and the syntax. They wanted to use the Hindi syntax with Dhundhari words. It was felt that these would further help the learners in switching over to Hindi language. They also wanted the learners themselves to contribute to the primer construction. Here, the method of Paulo Freire was discussed at length, and it was agreed that it would serve to arouse interest.

With these basic assumptions, the first exercise was started. At the initial stage, it was decided to take all suggestions into consideration, and prepare an elaborate outline of the primer. What emerged, therefore, was an outline of a primer 'Paili Pothi' with 21 lessons. The writers started writing the lessons, but at every step the need for Dhundhari linguists was felt. Fortunately, it was possible to find a few and seek their advice.

The workshop was extended for three days and with the help of these linguists, work was started on a second version

of 'Paili Pothi'. After this exercise, a primer emerged with 11 lessons. The first lesson was about Gopal, who keeps cows. The key sentence was 'Gopal Gayan Rakhe Chhai'. Gopal was the main character of this primer and a story around his life ran throughout the primer as a key chord. The keyword in the first lesson was 'Gopal'. This word itself means 'one who keeps cows' Three letters and two 'matras' were introduced. These two matras - namely Aa and O - were the most common and the most frequent sounds. The load in the first lesson was that of five characters; three consonant and two vowel sounds.

In this discussion, information about the rearing of cows would be given. The economic aspect of dairy development was expected to emerge in the discussion.

It was felt that more information should be about dairy development, particularly its modern methods. The second lesson is, therefore, about the breed of cows that Gopal keeps. The key sentence in the second lesson was to initiate discussion about the various breeds of cows, and the significance of better breeds.

In the second lesson only one main letter was introduced, but two other important sounds were introduced in this letter, as they were considered to be very essential sounds in 'Dhundhari' dialect. These are:

1. the nasal sound ◌ँ
2. the gutteral form of the letter 'ड़' which is written as ऊ/ल

The third and fourth lessons again are about dairy development. The message that the learner would derive from these lessons is of self reliance through dairy development. The fifth lesson is about Panchayat (local self-government) and its functions. The sixth lesson is about child care, the seventh about the most popular cultural festival of Jaipur i.e. Gangour, the eighth about the common customs of this area, and the ninth is again about self-reliance, which is a quality of Gopal's character. In these nine lessons all the major letters are introduced. After every lesson there is a short reading exercise. The tenth lesson contains all the letters of the Devanagari script, and the eleventh contains the numerals both in Hindi and English.

The primer was written in chart form by an artist, who used tentative illustrations. The charts were then tried out at the adult education centres in four villages by experienced project officers, who were trained to use the primer and asked to use it as far as the third lesson only. They were asked to find out the opinions of the learners regarding the content, language, illustrations and so forth.

The response to the primer was encouraging. It was well received not only by the learners at the adult education centres, but also by the instructors. The experience of the instructors was that the use of Hindi was not necessary to teach the primer. The primer facilitated dialogue with learners. In this dialogue, the learners suggested some new words to be added and some to be dropped. They wanted some songs to be included in it. These suggestions were accepted and incorporated in the field itself, and this factor gave new confidence to the learners.

The field test provided sufficient confidence for turning out the primer suitably modified, for use on a wider basis. In order to produce it in a unique shape and format, an artist from Ahmedabad was sent to the villages where the primer was going to be used. He was asked to study the faces, their costumes and colours. He went to the field with a NSVA volunteer.

The final format was then discussed. The size of the primer, the print area, the typography, the colour scheme and the cover design were discussed and decided. It was agreed that the folk colours should be used to give it a folk look. It was also decided to print it in oblong shape and in the size 18" x 22". It was, therefore, possible to use the same primer as a chart also, if needed.

After the final illustrations and type-setting, the primer was printed with all the necessary alterations suggested by the people during the field test, and finally sent to the field where there was already a demand for it. It came out in an absolute folk look.

Finally, the primer, which could be described as one prepared along with the people, about the people, and for the people, was sent to the field. Here it was hailed as

आपणो राज्य की बोली में किताब (a book in our own language). The people received it with cheers, and celebrated its arrival in the village. It was perhaps the first time that the arrival of a book was celebrated by the villagers, though there was no formal ceremony. In fact, the primer was released by the people for the people. They all sang a song printed in the primer डिंगी पुरी के राजा (The King of Dingpuri).

Now about 13,000 copies of the primer are in use and the feedback data, though encouraging, have yet to be completely analysed.

Testing of the materials

The testing of the materials should be built into the materials development process. Construction of pre-testing designs, preparation of measuring instruments/tools and identification of the sample population may all coincide with the materials preparation process. The first version of the materials has to be improved through repeated revision. This may be done through expert evaluation (evaluation by functional literacy workers, linguists, and the local agencies) and through learner try-out (in which the materials will be used to teach some learners and the results of these trials will be used to revise the materials).

Experts should be selected for their expertise in the subject matter, for their knowledge of the language in the capacity of linguists, for their knowledge of the community's organization and socio-economic and cultural patterns, and their knowledge of the nature and problems of literacy learning and teaching. More than one expert should be used to obtain a variety of suggestions. Each expert may be asked to vet the materials from the standpoint of his own field. They need to be told how the materials are to be used by the learners. Suitable revisions should be made after the evaluation.

In the learner tryouts, the learners' behaviour while using the materials should be observed. Is there any consonance between what the learner says about the materials and what he performs with the materials? When he reports that the materials are easy and simple, does he commit mistakes when he uses the materials? What are the specific areas considered easy and difficult both in the learners' evaluation of the materials and in their actual use of the materials in the learning process? On the basis of such observations, additions to and changes and reductions in the draft materials must be made.

Three phases of trying out a programme have been generally suggested: individual testing, group testing, and field testing. Try out the materials first on a single learner, even while the materials are under preparation. On the basis of the responses of this individual, the materials may be tried out on another learner. Suitable revisions may be made of the materials on the basis of this try-out. The materials may then be tried out on a group of learners. Errors made by the learners must be studied and suitable revisions made accordingly. In the next stage, the materials producer will not be involved. The materials will now be tested by others in actual field conditions. This field testing can be conducted in several places. The revisions may be made on the basis of the results of this field testing.

The testing of the materials should include an assessment of how well and how fast the learners comprehend the materials and how the organization of materials helps or hampers this process. The learners are not to be tested, but the materials are. Accordingly the wording of the questions must be carefully worked out; parts of the lesson will also be tested for their comprehensibility and readability.

The materials may be given to literacy teachers in the field. They may be asked to comment on the suitability of the materials for the population whom they are teaching at the moment and for whom the proposed materials are intended. If these teachers indicate certain portions as either too difficult or too easy, as irrelevant, or as undesirable, such portions may be dropped from the final version. Even then certain portions may be retained if these portions represent a type of thinking which should be represented according to the curriculum. Changes in wording will be studied for their

contribution to clarity and simplicity. In essence, the following question should be raised: can the learners, for whom the draft materials are written, actually comprehend the lessons within a textbook, and the books in the series?

The population tested should be within the zone of adult education centres using the books. The population should be large enough to represent a cross section of learners. Only the responses of those learners taking all the tests should be taken into account. There are well established procedures for the analysis and interpretation of data. This requires, once again, a team of experts well versed in testing and evaluation procedures.

The analysis of the try-out is important and it will identify areas which require revision. In essence, the analysis of samples may reveal what the basis of difficulty is - whether vocabulary, sentence structure, paragraph organization, or a combination of these, or the conceptual level. It will establish goals or upper limits in vocabulary for the different kinds of materials. It will suggest common vocabulary items. It will suggest topics with which the materials in the primers correlate. It will indicate the emphasis required on certain types of vocabulary, sentences and content and so on. Materials production is a dynamic process and hence trying them out must be considered an ongoing process, to be pursued regularly by materials producers.

The countries of the region are fully aware of the need for trying out the materials before their mass production. In Burma, the testing and evaluation of the curriculum and materials aim at identifying the factors that facilitate or hamper the organizational structure and the implementation of the programmes in achieving the fullest mass participation, and testing the level of achievement of the literacy skills of the adult learners. The feedback obtained from the various campaign committees and the information received from volunteer teachers through reports, questionnaires and personal interviews are carefully analysed for revising, modifying, and improving the curriculum and materials. Also, the Burma Educational Research Bureau has conducted several research studies on the teachability of the Adult Readers, and of these studies the Readers have been revised on the basis.

In Nepal, before the final texts and other materials were produced, most of the materials came in the form of

booklets and pamphlets. As the programme continued, materials were revised based on the findings obtained by means of observation before bringing them out in the form of textbooks. Based on the feedback from the field, the materials were revised and improved. The materials that were found ineffective, uninteresting, and irrelevant were replaced by better ones.

Indian case studies speak of the pre-testing of the materials conducted on a small sample population to know the future readers' reactions to their contents, illustrations and style. From the viewpoint of the testing, the materials were divided into three categories, namely,

1. basic literacy material (primer and work book),
2. supplementary and follow-up materials, and
3. visual aids.

The pre-testing of materials was done informally even at the time of preparation of the first draft to know future readers' reactions to them. This process proved quite beneficial in giving the organizers feedback for planning subsequent materials. For final pre-testing, base-line data were collected to select separate samples of the population for pre-testing each category of the materials.

The basic literacy materials were tested in field situations. A one-week initial training course was organized for instructors selected to test the materials. The trainee instructors were acquainted with the socio-psychological characteristics and socio-economic conditions of the sample population, principles of adult learning, acquaintance with the different types of materials and the techniques of using them. The initial response to the approach used in the preparation of materials was on the whole found to be encouraging. However, the respondents pointed out some deficiencies in illustrations, selection of words and format of the primer:

1. The illustrations should be attractive and in colour.
2. The supplementary reading exercises given at the end of the primer should be in different forms of presentation in an interesting style. They should include story, poem, dialogue and drama.
3. The concept of a loose primer, introduced with a view to accommodating a large number of problems

suited to different categories of learners and areas, was not well received. The learners pointed out the difficulty in handling the book as they were not accustomed to such a format. It also received initial resistance from instructors. Subsequently, the final version of the primer was stitched and supplements to a particular problem dropped.

The work was well received both by the learners and instructors. A few more patterns of writing exercises were introduced in the final edition of the workbook on the basis of the feedback received.

The multi-group pre-test approach was used for testing the supplementary and follow-up materials. Reactions of the sample groups were noted on the checklist developed for pre-testing of reading materials. The materials were reviewed and finalized in the light of the deficiencies pointed out by the respondents.

The visual materials were tested on a sample population group and their reactions in terms of colour, design, lettering and message were recorded on a checklist developed for pre-testing of visual materials. It was found that the realistic action photographs with neutral backgrounds were more effective than line drawings.

The data gathered through pre-testing revealed that the materials were very well received by the learners in terms of the appropriateness of their themes, contents, formats, illustrations and readability. The materials are being continuously reviewed and revised in the light of deficiencies pointed out by the learners and field workers in subsequent editions.

The criteria for measuring effectiveness of the instructional products may include

- Vocational competence
- Ability to adopt new methods and techniques
- Participation in social and civic life
- Standard of life
- Literacy standard

In the Philippines, the first drafts of the modules were subjected to the field tryout for further improvement

and refinement. The Afghanistan case study refers to a well organized monitoring system to test the curriculum and materials.

In Bangladesh, an editorial board consisting of the subject experts, specialists, teachers and implementing agencies scrutinize each manuscript. Bangladesh experience is that it is very difficult to identify the correct needs of the rural people as they are not fully aware of them. As a result it is difficult to design and prepare suitable reading materials for them. Manuscripts of the new primers were prepared and some adult education teachers were asked to teach them. The reactions of the teachers and students were noted, the necessary changes were made and the materials retested. Methods used were interviews, discussions and questionnaires.

Materials in relation to mass implementation

Does mass implementation mean the use of the same materials for different categories of adults in different regions? In the light of the discussion pursued so far, such an interpretation is not valid. The importance of taking into account the individual, group and regional needs has been emphasized. We have also emphasized that a large variety of materials, taking in view the broad spectrum of individual, group, and regional needs be prepared. When we talk of mass implementation we do not support the traditional view of a mass approach in which the individual, group, and regional needs have been ignored in favour of a certain standardized design. There have been modifications in the concept of a mass approach. In one version, the individual has been treated as a general citizen. We do need this overall spectrum of values. Such a programme could be extended where the local conditions are relevant and the resources are available. In fact, the variety of materials that could be made available to cater to various needs would be governed by the resources available, the national policy (is literacy to be encouraged in local languages/dialects or to be encouraged mainly in national languages?), expertise available for the preparation, and the infrastructure for implementing the scheme, and so on.

Mass implementation requires the coverage of the maximum number of persons within a broad category of needs and

and regions. It means that materials catering to individual, group and regional needs have to be adequately designed, produced, distributed and used. This demands physical resources, human resources (experts, teachers and others), material resources, and financial resources. The value of publicity must be recognized and exploited. The value of research must also be recognized. Research done by adult educators on literacy, research in communication media, innovation and diffusion, community development and research in related disciplines are all necessary for the success of mass implementation.

Mass implementation is possible only if a band of trainees properly oriented to the task is available. The duration of mass implementation, here the production of materials to cater to individual, group, and regional needs, should be short. The programme and the series of materials must cover both sexes, different categories of workers, different age groups, different social classes and regions. The cost of materials must be looked into. Mass implementation is not possible if the costs of materials are prohibitive. The agencies - production, distribution and instruction - must all be geared through proper orientation, and constant supervision and monitoring.

The Socialist Republic of Viet Nam reports that, due to the simple contents of teaching at step one (imparting the ability to read and write to the illiterates), many people can be mobilized to do the teaching. It is easy to open classes everywhere, and to meet the learners' demands, for what the learner needs is only an exercise book and a thin ABC textbook. In Papua New Guinea, a new venture began where about 90 literacy instructors from ten language groups were engaged in a workshop and trained in appropriate village technology and teaching skills.

In Indonesia, with the present policy, the illiterates are not 'hurdled' to the school any more. Together with their neighbours, they form a learning group of from five to ten persons, and choose a literate person among them to teach literacy and numeracy. The literate person acts as the tutor. Most of these tutors are primary school graduates, but some

are dropouts of junior high school, and some have passed junior high school.

An Indian case study reports that the field test gave the organizers enough confidence to produce the material and take it to the people. They were keen to produce it in unique shape and format, by inviting an artist who went to the villages to study the faces, their costumes and colours. After discussing the final format, the size of the primer, the print area, the typography, the colour scheme and the cover design were decided upon. It was decided to use the folk colours and give the material a folk look. It was decided to print it in oblong shape and in the size 18" x 22" so as to enable the use of the same primer as a chart also. After the final illustrations and typesetting, it was soon printed with all necessary alterations suggested by the people during the field test and sent to the field where there was already a demand for it.

In the Philippines many instructional materials have been prepared locally but they have to be duplicated in order to reach as many target groups as possible. The National Material Production Centre handles the printing of the teaching guides or lesson plans and materials produced by the Lingap Operations Centre (scripts for the air programme called "The President's Concern for the Community" broadcast once a week). The Lingap Operations Centre supervises the distribution of the Lingap Teaching Guides to the different agencies and personnel concerned.

Afghanistan states that since a mass campaign is not something to be organized by a single organization, it needs total mobilization of all governmental and non-governmental organizations in the country. In the village there are people who play an active role in the campaign. These activated people can be school teachers, extension workers, co-operative agents, or any other literate farmers and workers. Since the programme is a mass campaign and not an experimental project, only very simple techniques, mass techniques and no sophisticated materials were used. The main teaching aids are blackboards, books, charts and walls.

In Lao People's Democratic Republic, educational offices set up teaching groups to motivate the people in the rural areas and in remote mountainous regions. Every provincial education office as well as every administrative authority mobilized the students (during the summer vacation), and the teachers of general schools, training schools and professional schools, to persuade people to join literacy and post-literacy programmes. Agricultural co-operatives became the base for supporting these programmes.

In Thailand, mass implementation of adult literacy is achieved through a variety of programmes. The regular functional literacy programme is classroom-based. The Walking Teacher Functional Literacy Programme for the Hill Tribes complements the classroom sort of functional literacy activities. The goal is to provide literacy education in rural areas, where no other facilities or resources for such education exist. When literacy needs in one area have been met, the teacher moves to another area. The Walking Teacher Programme focuses on the teaching of literacy to the tribal people who differ culturally from other Thai people and who do not speak Thai well - although they are Thai citizens.

In Pakistan, the Provincial Bureaux of Curriculum have been engaged in promoting adult education/literacy programmes through arranging workshops for orientation or re-orientation of instructors, micro-testing of curriculum, evaluation of objectives of programmes and evaluation of textbooks. There have been experimental pilot projects integrating education with rural development. There are mobile schools, in which a school teacher is provided with a textbook and portable equipment. The teacher moves with the caravan and holds his classes wherever the caravan settles down. There are primary education projects, mosque schools, mohalla schools and adult literacy centres involved in the mass implementation programme.

Teachers' guides

Just as teaching aids are a part of the instructional materials, the teachers' guide books should also be considered as part of the instructional materials. A question arises as to whether there should be a separate teachers' guide book

or whether the guidelines to the teacher be incorporated in the students' books. No hard and fast rule is applicable here. In all cases, however, a teachers' guide is based on decisions as to how each lesson should be taught.

A teachers' guide may have two parts, one, a general section, and, the other a section giving points specific to respective lessons. The general part should include curricular and syllabus goals; characteristics of methods of teaching and testing, weightage for lessons, skills, and other matters; general introduction to exercises and drills; guidelines for the preparation of home-made materials, reading suggestions and the like. It should also include guidelines for the maintenance of records of learners' progress, difficulties faced in teaching/learning, time to be taken for teaching a lesson and so on. It should also contain the specific methods of teaching a particular lesson, relationship of one lesson with another, questions for the instructor to test the participants' comprehension of what is read, tips for conducting review lessons, information for giving additional exercises and reference information.

The content of a teachers' guide will depend also on the answers to the following questions: what is the learning situation in which the instructor has to function? What is the background of the instructor? What is the instructor expected to do in this programme? What are the roles to be played by the instructor? What competencies (knowledge, skills, attitudes and values) should the instructor develop for his work? What kind of training programme is necessary? How can it help develop the skills and qualities desired? What resources and aids for the training of instructors are suitable and how can these be mobilized? And how can the effectiveness of training be assessed?

The contents that should go into a teachers' manual are generally listed as follows: (1) Why literacy? (2) Working with adults, (3) Methods of teaching language to illiterate adults, (4) Organization of literacy classes, (5) Patterns of adult education, (6) Teaching materials and equipment, (7) Audio-visual materials, (8) Effective techniques of conducting a class, (9) Teaching adults: reading and writing, (10) Follow-up services, (11) Problems of drop-outs

and teaching methods for drop-outs, (12) The adult teachers, (13) Supervision, (14) Testing of adults, and (15) Literacy records.

In Bangladesh, primers include instructions for teachers. In the Socialist Republic of Viet Nam teaching aids are part of the teachers' guide. As the best 'teaching aid' is the teacher, Thailand emphasizes the importance of teacher training.

Work-books

A work-book is also an integral part of the materials to be presented to learners. It is intended to give practice to the learners in writing, to test their recognition of letters and words, to test their comprehension of words, phrases and sentences, and to judge their grasp of the subject matter. The following points are generally emphasized in the preparation of a work-book.

1. After every question, the work-book should provide space for writing or marking a response.
2. Similar questions in different lessons should appear in the same order.
3. A lesson in a workbook should be done immediately after the corresponding lesson in the reading text.
4. A workbook should also have revision lessons at regular intervals.
5. Exercises must be explicit and appropriate to the learner's attainment, and the lessons of the reading text.
6. The workbook may be used in the class itself unlike in the formal schooling where workbooks are generally treated as home assignment books.
7. The number and kinds of workbooks will depend on the curriculum and the design of the primer.
8. The workbooks should progressively withdraw props, if any, and should encourage the learners to do the reading and writing by themselves.
9. The question of whether there should be an independent workbook apart from the primer is to be decided before the primer is designed.

Chapter Four

EVALUATION, FOLLOW-UP AND RESEARCH

Evaluation

Evaluation of the materials through an evaluation of the performance of the learners is necessary. Testing how a learner has progressed from one section of the book to another and comparing his achievement with the performance of others in the group are all necessary. In a manner of speaking, evaluation of the book in this manner evaluates the process of the whole literacy programme.

To begin with, the materials producer must provide for the teacher, ways of finding out the learning needs of the learners and the results of his teaching through the use of the materials. These may be done through observation tests (to be designed by the author and placed in the book). The teachers' manual may give an idea to the instructors as to how they should interpret the data. In addition to interpretation, steps for remediation of possible shortcomings may be also indicated. It should be emphasized that the aim of evaluation is not to decry or praise a particular material. The aim is to find out the effectiveness of the material for the stated aims and to make the material more suitable on the basis of the findings of evaluation.

In order to evaluate a book, the following details are required: (1) number of pages in the book, (2) number of running words, (3) number of words per full page, (4) size of type, (5) length of line, (6) number of lines per full page, (7) average number of words per line, (8) average number of words per lesson, (9) number of new basic words per book, (10) number of different words per book, (11) ratio of new words to running words, (12) average new words per class meeting, (13) number of new words per page, (14) number of repetitions of new words per lesson, (15) number of recurrences of new words in later lessons in the book,

(16) number of lessons - short/long in a book, (17) number of pages per short lesson, (18) number of pages per long lesson, (19) number of words in a long lesson, (20) number of units per book, (21) number of lessons per unit, and (22) number of lesson pages, number of exercise pages, number of test pages, number of pages of vocabulary list, table of contents page, acknowledgements page, total number of pages in the book.

The above information provides an outline of the book. It does not provide us with a norm against which the information is to be evaluated. Such a norm is to be obtained from the curriculum and from the findings of the psychology of learning and other related disciplines. Such findings could be culture and language-bound in the sense that what is true of one language may not be true of another because of differences in the script, pedagogical structure and so on. Determination of the number of lessons a book may have is a matter of the length of the book, the number of units in it, the minimum types of contents to represent the topics and the length of lessons adult learners can absorb.

In general, the following questions are asked in evaluating a textbook:

1. Does the series utilize the basic vocabulary in the language, starting with the familiar forms?
2. Does the series utilize the vocabulary appropriate to the topic and yet within the range familiar to the learners?
3. Does it present the common sentence structures, word derivations, inflectional categories, beginning with simple and common forms and leading on to complex ones?
4. Does the material use the punctuation required by the contents?
5. Does it present words containing letters easy to write, and proceed to more difficult forms?
6. Are new words presented gradually and repeated often enough to assist learning (in the same lesson, later lessons and in later books in the series)?
7. Are words of multiple meanings presented one meaning at a time?

8. When one of two common words might have been appropriate in the text, has the choice clearly contributed either to repetition of something learned or to the development of new learning?
9. Do sentences, paragraphs, lessons increase in length and complexity throughout the book/books in the series?
10. Is the book sufficiently durable for the use it is to have?
11. Is its appearance attractive to the adult learners?
12. Is the paper thick enough not to show print on the reverse side?
13. Is the paper off-white and dull in finish, without glare?
14. Is the print black enough to make a clear contrast with the paper?
15. Is the print large enough for the beginners?
16. Is the type easily legible, so that the letters are not confused with one another?
17. If there are several styles in printing, which one is chosen? Is this choice appropriate? Is consistency maintained?
18. Is the print placed clear of the illustrations?
19. Is the page artistically balanced?
20. Are there adequate margins given in the printed page?
21. What is the relationship between the teachers' manual and the textbook?
22. Are the illustrations appropriate to the content, and attractive to the learner?
23. Are the illustrations used to give exercises, and for testing purposes? Are the illustrations used for objects that cannot be brought to the classroom?
24. Is the illustration necessary at all for comprehending the information?
25. Does the illustration cover all the information so that comprehension of matter through reading is not at all necessary?
26. Do the teaching materials provide for the assessment of readiness for new learning?

27. Do they provide exercises for the development of readiness?

28. Do the books put the burden of active learning on the learner, by such means as
    - asking for picture interpretation
    - asking for generalization and induction
    - asking comprehension questions which require thought rather than merely finding the place that says it.
    - having the learner retrace the steps in his own learning in a written record which he keeps.
    - using other activities that demand the active involvement of the learners.

29. Do the teaching materials establish quick recognition of a word at sight, as well as the recognition of letters in new words?

30. Are the materials so designed as to discourage memorization and encourage understanding and creativity?

31. What is the relationship between the book, teaching aids, and other supplementary materials?

32. Do the materials provide for the assessment of the learner's needs and achievement?

33. Do the materials provide for silent as well as oral reading?

34. Do they provide for skimming exercises? (Find the place that tells . . . . .)

35. Do they encourage learners to think in many ways (a) by setting a question before the learners read, and (b) by setting additional questions and related activities?

36. Are there suggestions for learners who are slow to read and learners who learn rapidly?

37. Do writing, speaking and listening activities support the reading programme?

38. Are the learnings carefully built, one upon another?

39. Are skills taught, not just assumed and required?

40. Is the learner given opportunities for self-evaluation?

41. Do the tests cover all the items for learning?
42. Are directions to the learner, which he is to read for himself, written in words he can understand, and do they express their intent clearly?
43. Are directions to the teacher sufficiently simple, clear and detailed, so that a novice can follow them?
44. Are additional teaching aids which are not provided, but suggested or required in connection with activities in the learning programme, easily and cheaply available wherever the books are likely to be used?
45. Does the reading book cover the content in the curriculum?
46. Does the reading book follow the sequence of content suggested by the curriculum?
47. Does the content inform as well as entertain?
48. Is there clearly some attempt to correlate the reading book with the content and goals of the other subject areas in the curriculum?
49. Has research preceded or accompanied the development of the reading series to validate its content and methods?
50. Has the evaluation been based upon actual try-out with learners or upon the judgement of teachers as to their feasibility?
51. Has the programme been implemented in a way to be really relevant to the social and human environment for which it was designed and intended?
52. Are the materials integrated with development objectives and purposes?
53. Is empnasis on the evaluation of the materials, or the learners?

The above questions indicate the close relationship between the objectives of the curriculum and the content of the evaluation process. A thoughtful evaluatory procedure contributes to improving the quality of curriculum and materials.

The evaluation is generally an expert's business. It is also an elaborate and, at times, a time-consuming process.

However, there are certain quick evaluation techniques that should be utilized by all those concerned with materials production and implementation of literacy programmes. Some of these techniques are as follows: (1) evaluation through reaction forms supplied at the end of every meeting, (2) interviews with selected persons from the target audience, and (3) pre- and post-tests.

An important question is: who should be entrusted with the responsibility of evaluation? While the materials producer can and should do some evaluation by himself to find out the effectiveness of the materials he has designed and to find out what improvements are required, evaluation of materials is better done by a team not connected with the preparation of materials. This would ensure objectivity, and it would also bring out new ideas. This team should be clear as to the objectives of the materials. The team, through appropriate evaluation procedures, would determine whether these objectives have been achieved. Evaluation should cover not only the use of materials but also the processes that were gone through in the preparation of the materials.

In Burma, evaluation provides the central literacy committee necessary data for reviewing, consolidating, extending and, if necessary, revising the on-going programmes. It aims at discovering also the strong and weak points of the textbook and the literature for neo-literates so that the necessary measures to review and revise the textbook may be undertaken.

In Nepal, teams of experts from various fields such as health, agriculture and education were sent to supervise the classes. Evaluation was based on their observations, and talks with local leaders, administrators and social workers. This evaluation was conducted at the end of the session. The following specific objectives served as a guideline for the evaluation. The adults should know at the end of the session:

1. Literacy

   a) Reading and writing simple language in Devanagari script.

b) Simple addition, subtraction, multiplication and division.

c) Simple calculation using the metric system.

2. Agriculture (specified activities)
3. Health (specified activities)

The evaluation was conducted through administering questionnaires, conducting interviews and discussions with the participants, teachers and supervisors. It yielded several findings to improve the quality of materials, contents and teaching methods.

In the Socialist Republic of Viet Nam, the evaluation of materials and methods of literacy was based on the criteria for a person to be recognized as literate. The methods and materials meant for imparting literacy to minority nationalities were decided through a scientific conference attended by linguists.

In Indonesia, the more highly educated manpower available in the community (the teachers of the village primary school, and secondary school graduates, the BUTSI volunteers, the KKN students, and so forth) are assigned to play the role of monitor, evaluator or organizer. Each monitor is assigned to evaluate the programmes of five to ten learning groups. They all report to the village task force chaired by the village chief who is supervising the programme. The evaluation revealed three inter-related weaknesses: not enough training is given to both the tutors and monitors; because the learning materials are written in the Bahasa Indonesia, the tutors had to explain the meaning in the mother tongue; hence, the medium of instruction should be Bahasa, Jawa in that area; and, more relevant learning materials, both in content and methodology, should be provided. So far too much attention is given to acquainting the learners with the symbols (Latin characters and Arabic numeracy) and not enough to understanding the meanings of the symbols.

The Indian status report states that the biggest weakness has been the lack of inter-agency contact and co-ordination. There has been no attempt to evaluate the effectiveness of the numerous teaching/learning materials available in the country. The few instances of materials' evaluation are the exception rather than the rule.

In Afghanistan, the learners are tested at different stages to find out the achievements and problems concerning the methodology and materials. One of the objectives of this testing is to determine the level of achievements of the learners so that they can be transferred to the formal system. In a mass campaign, however, it is difficult to adopt the testing and evaluation methods applicable to small scale programmes; mass techniques have to be used.

A Philippines case study reports that written evaluation examinations were given to the participants before their graduation to assess the effectiveness of their learning, and the materials. The test itself was based on questions contributed by the teachers involved in the project and was administered by a committee created for the purpose. This was in addition to the weekly evaluation tests given by the teachers in their respective classes. In another project, no formal evaluation was employed except an observation checklist to measure changes in attitude and improved ways of living. Positive participation in community affairs relating to health and sanitation, food production and population education was noted among learners. Several provincial adult literacy programmes have been evaluated in Pakistan.

Follow-up

In this Portfolio of Literacy Materials Series, a separate monograph is available on the development of follow-up materials including those for media. Hence this section is restricted to the follow-up activities that should be pursued once the evaluation of the instructional materials is over. Revision of the materials is undertaken on the basis of the try-outs as already explained in the section on testing of the materials. This revision precedes the production of materials on a mass scale. Evaluation of the materials comes after the production and use of the instructional materials on a mass scale. Evaluation of instructional materials is made in conjunction with the evaluation of all the elements of the programme. In undertaking the evaluation of the instructional materials, we seek to find out how the contents and the design of the instructional materials jibe with the

other elements of the adult literacy programme. We should bear in mind that even in literacy programmes, instructional materials are only one, though very important, component and that there are several equally important components. The findings of the evaluation should tell us the lacunae in the instructional materials. These lacunae should be sought to be remedied in two ways in the follow-up activities: by improving the primers in subsequent editions and by adding a number of materials to improve the results of the programme.

The Philippines status report states that an exploratory survey indicated that the various agencies involved have in stock a great variety of brochures, posters, flip charts, and other very useful materials which could be used for the purpose. It is only a matter of relating these materials to broader goals that would encompass the other agencies. The task at hand, the report states, is to make an inventory of these materials and to orchestrate them into learning chunks which are meaningful to the target clientele.

The evaluation of Thailand's programme led the department of non-formal education to undertake suitable follow-up activities in the redesigning of the materials. Adult learners in the programme were to spend only two hours per day three days a week. So, it was decided that each lesson should be a self-contained unit which could be completed in the two hour period. The understanding that rural adult learners could not attend class on a regular basis further reinforced this concept. In these self-contained lessons all components, namely, keywords, reading passage, language drills, and arithmetic lessons were related to the particular knowledge or concepts covered in the lesson.

Research

In order to prepare effective materials, it is essential to have a proportionate weightage assigned to each aspect of the materials in consonance with its importance. A minimum standard that must be attained must also be prescribed. This minimum standard is now prescribed mainly following the models available in the formal schooling system prevailing in the country and/or following the adult literacy models from countries of other regions. While such an

acceptance of the models of formal schooling and adult literacy materials used elsewhere may be inevitable at a stage when infrastructures and adequate expertise are lacking, it cannot be justified now. This is fully borne out by the status reports, case studies and the deliberations at the workshop. Most of the countries of the region have had good experience in the last several decades in conducting literacy programmes and in producing a variety of literacy materials. This experience needs to be properly canalized and evaluated. Researches are now necessary to identify the essential aspects that the materials of a country must possess to optimize the rate of acquisition and retention of literacy. These researches must be specifically done taking into consideration local conditions.

Research should be conducted to identify the most effective processes of selecting the appropriate content and for sequencing and presenting the content thus selected. Research is necessary to identify the most appropriate form the body of the lesson should assume, and the style in which it must be presented. Research is also necessary to find out the proper mix of these forms within a single primer. More often than not, the choice of exercises and the choice of elements that go into the exercises are done on an intuitive basis. More empirical findings are demanded here, especially when we notice that the forms of many of these exercises are not suitable to the genius of the language, and also because the forms of these exercises tend to be borrowed from the second language and first language textbooks of formal education. The exercises should show a concern for the interests and abilities of adult learners. The selection, sequencing and presentation of the exercises must be done on the basis of researches into the structures of the language and usage. What is the role of speaking and listening skills? What is the relationship between the acquisition of basic skills (such as speaking, listening, reading and writing) and higher forms of the same skills in a literacy programme? What is the layout that is most conducive to the acquisition of literacy - colour, print types, number of words in a line, handwritten as opposed to printed forms where such a distinction is

maintained, and so on? Can the layout vary from level to level? What should be the length of a lesson and the primer? Should the tones in the language be marked in the initial literacy primers? There are many more questions like these that require to be answered on the basis of the findings of objective and empirical research with reference to the community and the language of the adult learners.

Research is required also to understand the intellectual development, conceptualization, perception, memory, motivation, adaptation and attitudes of the adult learners. Adults present a mixed ability background; we must know the range of this mixed ability group and the factors which govern the use of this ability. How is functional literacy better than mere literacy? What are the pedagogical factors that help or hamper the acquisition of functional literacy? What are the steps that we should take to absorb and exploit the educational technology or reading, writing, and arithmetic? What is the psychology of the learning process among illiterate adults? What is the psychology of vocational training at the place of work? Research on the design and use of instructional materials has necessarily to be inter-disciplinary.

Research on the preparation of instructional materials has led an Indonesian case study to suggest the following. Capital letters should be used for all the materials in the initial learning stage. Teaching to write in the writing style of symbols is most important in the learning process. It should be taught at the very beginning of the learning process. The capability to write with his own hands promotes a sense of pride which in turn acts as the reward to the educational process.

Among the significant points emphasized in the Philippines as a result of research were (1) the pursuit of a systems approach to developing instructional materials initiated by a needs identification survey, (2) the fundamental need to establish rapport with the target population to make such surveys successful, (3) the importance of considering both the target learners' educational level and the pedagogical principles in developing instructional materials, and (4) the value of ensuring availability of a market for newly learned

skills in order that the non-formal education programme would be patronized.

Research in Nepal aims at eliciting from each individual a key vocabulary of words which are of particular importance to that individual. These must be words closely tied up with the individual's dynamic life. The important factor considered here is that each individual will have a chance to learn words that have a deep personal meaning for him or her.

In Thailand, research on literacy materials covers, among others, teacher training, content relevance, processes to improve thinking as well as doing *(khid pen* and *tham pen)*, formative programme evaluation and functional education.

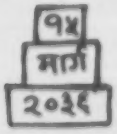
The countries of the region have often combined the testing of the materials, evaluation and research together. No distinction is easily made in many countries between these, although substantial work in the direction of research on literacy materials, independent testing and evaluation of materials, has been undertaken.

APPENDIX

SAMPLE INSTRUCTIONAL MATERIALS PREPARED AT THE UDAIPUR WORKSHOP

No. 1

Language : Nepali
Level : Initial
Description : A lesson with instructions for the teacher



जति आमदानी त्यति खर्च

आमदानी

भन्नु होस्

आ म द न
ा ी

चिन्नुहोस्

आ	आम आन
म	मन
द	दम
न	नम
ा	दाम दान नाम
ी	नीम दीन दानी

पढ़नुहोस्

आमा आदी नदी नानी
मन मदन दमनी दामी

लेख्नुहोस्

— ा ो ी ू ॅ ं ँ ः
ऽ उ ऊ अ अ आ
। ि ् म म मा
। ट ढ द द दा
० ण न न ना नी

जाति आमदानी व्यति खर्च

TEACHERS' GUIDE

As much earn so much spend (Do not spend more than you earn)

I. Discussion on content

Teacher : Look at this picture! Why are the pockets of this man empty?

Learner : He has no money.

Teacher : Why has he no money?

Learner : He has spent all his money.

Teacher : Look at the calender! Only 15 days have passed and his pocket is empty. How can he meet his expenses for the rest of the month?

Learner : He may take a loan or he may go without food.

Teacher : Is it good for a man to live like this? What is your opinion about the man's spending habits?

At this stage, the learners may give various responses. The teacher should give a chance to each and every learner to express his views on income and expenditure. After listening to these different responses the teacher will sum up the discussion by giving his own appropriate views on income and expenditure.

II. Additional information through specialists

The teacher should invite an employee from the local branch of a bank to the class to impart information on savings.

III. Literacy steps

After the above step the teacher will write the word आ मदा नी and will help the learner to practice and pronounce the word आमदानी and then pronounce the letters आ, म, दा नी separately.

After the pronunciation drill of the letters and words, the teacher will show the hand movements to write the different strokes of each of these letters. He will ask and encourage the learner to write these strokes. After the practice of writing these strokes, the teacher will teach writing keywords and other words built from these letters.

SAMPLE INSTRUCTIONAL MATERIAL
PREPARED AT THE UDAIPUR WORKSHOP

No. 2

Language : Lao
Level : Initial
Description : A lesson with instructions for the teacher

ສາທາລະນະລັດປະຊາທິປະໄຕ ປະຊາຊົນ ລາວ.

ແບບຢ່າງບົດຮຽນ ພາສາລາວ ຫ້ອງ ລົບລ້າງ

ตำ ลา สอน แบบ ย่าง พาสาลาว

ชั้น ลิบ ล้าง ความ ขี่ ธุ้ หนังสือ ใน ส.ป.ป.ล.

- บัด สอน นี้ แม่น สอน ใน ไลยะ ทาง ของ ทาน ฮบ ลับ ล้าง ทัง มี เนื้อ ใน สอน ก่วง กับ ผะยาด ยาดทะยัก

จุดประสงค์ ระดับ คาดหมาย ของ ทาน สอน

ก.- ด้าน ทาน สิ่ ความ รู้.

- ให้ นัก ฮบ รู้ สะหละ ปะสม 4 ตัว : xาก - xาด - xาง - xาน โดย ใช้ สะหละ xา ปะสม กับ ตัว สะกด 4 ตัว : ก - ด - น - ง

- ให้ นัก ฮบ เข้าใจ เนื้อ ใน ของ บัด และ มี ความ สามาด มา ใช้ วิ ที่ ป้อง กัน ผะยาด ยาดทะยัก ใน ชั้น ต้น.

ข.- ด้าน ทาน ศึกสา แนวคิด

- ให้ นัก ฮบ มี สะติ สะหัง ตัว ใน ทาน ต่ำ ลา ชีวิด.

- ให้ รู้ จัก สา ความ สะอาด เพื่อ สุกสะพาย ของ ตัว.

ค.- วิ ที สอน

- ใช้ วิ ที . ปะติบาย . ลับ ทะนา.

ພະຍັນຊະນະລາວ

ກ ຂ ຄ ງ ຈ
ສ ຊ ຍ ຢ ດ
ຕ ຖ ທ ນ ບ
ປ ຜ ຝ ພ
ຟ ລ ວ ຫ ອ
ຮ

ສະຫລະຕົ້ນ

ະ ◌ າ ◌ ◌ ◌ ◌ ◌
◌ ◌ ◌ ◌ ◌ ◌ ◌ ◌
◌ ◌ ◌ ◌ ◌

- ສະຫລະປະສົມເຍີ້ ຕົ້ນ ຍນຸຕ : ◌◌◌ . ◌ະ . ◌◌ະ ...
- ສະຫລະ ປະ ສົມ ຕົ ຈ ໜັ ◌ : ◌า - ◌าม - ◌ิก ...

ເນື້ອໃນບົດຮຽນ

×າກ	ມາຈາກ
×າດ	ພະຍາດ
×າງ	ສ້າງ ສ່ວຍ
×ານ	ຕ້ານ ທານ

ບາດ ທະ ຍັກ
ເກີດ ມາ ຈາກ
ເມື່ອ ເວ ລາ
ຮັກ ສາ ໃຫ້ ສະ ອາດ
ໃສ່ ຢາ ບໍ່

ເປັນ ພະ ຍາດ ຮ້າຍ ກາດ
ບາດ ບໍ ຮັກ ສາ
ຄົນ ເຮົາ ຖືກ ບາດ
ສ້າງ ສ່ວຍ ແພ ຮ່ຳ
ຕ້ານ ທານ ພະ ຍາດ .

ขั้นตอนการสอน	เนื้อในบทเรียน
ขั้นที่ 1 : - ทบทวนบทเก่า ขั้นที่ 2 : - สะแดงคำสะหลบ ย่างชัดเจน ให้นักเรียนพ้อมกันว่า : ขาก - ให้นักเรียนแยกกันประสมสัญญะสะหลบ ขาก แล้ว ให้เขาสะหลบ ขาก เข้ากับสัญญะสะหลบ ตัวใด ตัวหนึ่ง ตามลำดับ เช่น : ล้างขาก ให้นักเรียนอ่านพร้อมกันหลายๆ ครั้ง. - เมื่อนักเรียนเข้าใจแล้วสอนคำว่า ขาก ตัวแม่ ให้สะกดคำ ให้ได้ ขาก ขาก ทดสอบนักเรียนทีละคน ประมาณ 4 คน. ขั้นที่ 3 : - เมื่อนักเรียนเข้าใจแล้วสอน 4 คน ดังแล้ว ให้นักเรียนแยกอ่านบัตรคำอีกครั้ง ทีนี้ สะหลบประมาณ 4 ครั้ง ย่างคล่องปากแล้ว. ขั้นที่ 4 : - เมื่อนักเรียนอ่าน 1 ได้แล้ว ครูให้ทบทวนความเข้าใจของนักเรียนกับเนื้อในของบทเรียน. - เมื่อสังเกตเห็นว่านักเรียนมีความเข้าใจแล้ว ครูให้นักเรียนสะกดคำ ครูอาจจะประเมินผลโดยการสังเกตการณ์. - แนะนำให้นักเรียนนำเนื้อในบทเรียนไปทบทวนที่บ้าน. ขั้นที่ 5 : - ทบทวนให้นักเรียนแยกนักเรียนเป็นกลุ่มๆ ละ 5 คน	ขาก มาจาก ขาก พะยาด ขาง ล้างสวย ขาม ต้มหาม ปับปุงบทเรียน ขาดหะยัง เป็นพะยาดร้ายกาด เกิดมาจาก ขาดบ่ะฮ้าสา เมื่อเวลา ถืมเสิาถืกขาด ฮ้าสาใช้สะยาด ล้างสวยแพงง่ำ ใส่ยาบ่ำ ต้มหามพะยาด เฝิกหัด ให้นักเรียนประโยคสั่งนี้ : ขาดหะยัง - ร้ายกาด ถืกขาด - ล้างสวย ต้มหามพะยาด

Instructional materials development

Introduction

This lesson is from a primer for illiterate adults.

Objectives

- Our first objective is to teach the learners the combination of vowels with consonants.
- The second objective is to explain to the learners the meaning of the words in the text and use one most important word for discussion.

Teacher's guide

1. Ask the learners some questions on the lesson for a few minutes.
2. Explain the new lesson by writing the vowel and then the consonant. Read them slowly and ask the learners to follow.
3. Ask the learners to practise writing. For this you must show how the letters are written.
4. After the skill in reading and writing these words is acquired, explain the whole text. Just pick up one most important word and discuss the content of the lesson. Here the most important word is *Tetanus*.
5. Raise questions like the following:
   - How and why tetanus happened?
   - Then tell the learners how to prevent tetanus infection.
6. Discuss with the class and ask the questions one by one.
   - How is tetanus infection caused?
   - How to prevent the tetanus infection?
   - Other related questions.
7. Ask the class to read the text loudly.
8. Give them the exercises.
   - Copy the reading text.